[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

5 1/4 41

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Geo. Frampton,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 11.

State: Cal.

1. What is the depth of your well in feet? 196 ft. What is the size of the pipe in inches? 7 inches What was the cost of the well? .....

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it? It flows about two inches,

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 15 acres.

5. What crops have been raised by the water from your well, and about how many acres of each? Principally Alfalfa about 12 acres.

C. O. P.—10m

My Artesian well is the oldest in this section of the country and I do not know the cost.

Yours Respectfully

Geo. Frampton.

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5-1
1-91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Rudolph Sherer

P. O.: Compton.

County: Los Angeles; Page: 67; Line: 22.

State: California.

---

1. What is the depth of your well in feet? 145 feet. What is the size of the pipe in inches? 7 ins. What was the cost of the well? about 200.00.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

runs about one inch over pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? only in garden If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

only raise Vegetables with water, other crops without, 6 to 7 cuttings of alfalfa with out irrigation

C. O. P.—10m

a fountain inch plant can be obtained here by going from 200 to 270 feet deep.

our rainfall winter is within 10 to 15 inch.

good trees, especially Pears & Apples without irrigation.

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3/31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mary A Brown.

P. O.: Artesia.

County: Los Angeles; Page: 33; Line: 6.

State: Cal.

1. What is the depth of your well in feet? 140 feet. What is the size of the pipe in inches? 6 inch. What was the cost of the well? $142.50.

2. Have you measured the water from your well? —. If so, how many gallons per minute flow from it? —

3. How was this measurement made, or, in other words, how accurate do you consider it? —

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season? —

5. What crops have been raised by the water from your well, and about how many acres of each? —

C. O. P.—10m

in boring my Well We struck the Strata at 124 feet but had to go on 16 feet deeper to strike solid bottom to set the pipe on, and then perforated the pipe at the strata, therefore dident get much of A flow, but it is very valuable for stock water and household purpose, it being the very best of water,

4 23/24 91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3/31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Thomas J. Chambers,

P. O.: Compton.

County: Los Angeles; Page: ; Line: .

State: Cal.

Major. T. Chambers.
Compton, Cal.

1. What is the depth of your well in feet? 175-. What is the size of the pipe in inches? 6. What was the cost of the well? 300 00.

2. Have you measured the water from your well? . If so, how many gallons per minute flow from it? I never measurd it But quite a large Stream runs thro

3. How was this measurement made, or, in other words, how accurate do you consider it? Year round

4. Has any of this water been used for irrigation? Yes- If so, how many acres have been watered in any one season? 8. ac-

5. What crops have been raised by the water from your well, and about how many acres of each? Strawberrs 3 ac- & Cabbages 5 - It might have done more as the water runs to waist 3/4 of the time

C. O. P.—10m

I am intending to use all the
water and think it will water
20 to 30 ace - mainly in Alfalfa -
the well is only a fair one -
not as good as many in
this Community It was put down
8 or 10 years ago when
they did not know as much about
wells as they do now - and if
it had been put down 25 to 30
feet it would have been a pretty
good one - I intend to put
down another one - or sink
this one - as well can be
had almost any place -
on the Ranch -
One half of the Ranch does not
need any well as it is Semi -
moist lands - and all the
lands would bear three crops a
year in Alfalfa without irrigating -
but irrigated 75 per cent. 8 - the dry lands
is the best if you have water -

Respectfully T. F. Chambers

Mayor T. Chambers
Compton, Cal.

Mayor T. Chambers
Compton, Cal.

4 23 91
24

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4–1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Lucien Stockwell

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 12.

State: Cal.

---

1. What is the depth of your well in feet? 130. What is the size of the pipe in inches? 7. What was the cost of the well? $2.00 00/100.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? I cant tell you
It flows two inches up over the Pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes sir. If so, how many acres have been watered in any one season? about ten, Pipe can irrigate 20

5. What crops have been raised by the water from your well, and about how many acres of each?
Alfalfa. It helps it out wonderfully in the fall, or latter summer.

C. O. P.—10m

4 23/24 91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Chas. W. Caltrin

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 17.

State: California.

---

1. What is the depth of your well in feet? 214. What is the size of the pipe in inches? 7. What was the cost of the well? three hundred dollars

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? when the well is open it flows over the pipe fourteen inches & think about 60 inches miners measure

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? about one hundred one season

5. What crops have been raised by the water from your well, and about how many acres of each? about fifty acres of corn & the balance garden truck

C. O. P.—10m

I have not used the water but very little myself for irigation as I had it bored to get water for stock purposes & keep it shut of the most of the time it is very fine water & I think that it would easily irrigate from three to five hundred acres if I was properly handled

4 23 91
24

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4/1, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Ira N. Emmons

P. O.: Artesia

County: Los Angeles; Page: 33; Line: 27

State: Cal

1. What is the depth of your well in feet? 133. What is the size of the pipe in inches? 4 with ½ in flow. What was the cost of the well? $130.00

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? five

5. What crops have been raised by the water from your well, and about how many acres of each?

I used part of it for irrigating my orchard garden & some alfalfa about 5 acres in all I did not need much so did not keep an accurate account but by confining

C. O. P.—10m

the water in a reservoir 12 acres could be irrigated from a 4 inch pipe. The water is first-class & in an artesian belt where good water can be found from 125 ft. to 150 ft.

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

57 51 / 4 5

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3/31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M Wheeler M. Inglis

P. O.: Florence.

County: Los Angeles; Page: 40; Line: 3.

State: Cal.

---

1. What is the depth of your well in feet? 110. What is the size of the pipe in inches? 4 in. What was the cost of the well? $1,120.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? Not Known

3. How was this measurement made, or, in other words, how accurate do you consider it? Know measurement has never been made

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season? none

5. What crops have been raised by the water from your well, and about how many acres of each? none

C. O. P.—10m

57, 57/1

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C. Mar. 31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M. Harrington Browne

P. O.: University

County: Los Angeles; Page: 45; Line: 7

State: Cal.

P. O. Box 650 Los Angeles Cal.

1. What is the depth of your well in feet? My well. What is the size of the pipe in inches? not. What was the cost of the well? a flowing well.

2. Have you measured the water from your well? You have If so, how many gallons per minute flow from it? misinformed; The water, however, is artesian, in that, it rises

3. How was this measurement made, or, in other words, how accurate do you consider it? a number of feet for the pipe, and is not surface water, but arises in a substratum many

4. Has any of this water been used for irrigation? If so, how many acres have been watered in any one season? feet below the first water gravel.

5. What crops have been raised by the water from your well, and about how many acres of each?

The supply appears inexhaustible. I could irrigate the Nebraska desert had I proper ditches & storage. Harrington Brown

C. O. P.—10m

3/1 5/1

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C. Mar 31, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Jno. Howland

P. O.: University

County: Los angeles; Page: 45; Line: 10

State: Cal.

1. What is the depth of your well in feet? 115 ft. What is the size of the pipe in inches? 7 in What was the cost of the well? $125.00.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it? .....

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? Only in Small patches

5. What crops have been raised by the water from your well, and about how many acres of each? Corn an Vegtibels potatoes alffala

C. O. P.—10m

Mr Superintendant of Census
As it fel to my Lot to git a letter
Or rather a Note requesting
Some One to answer your
Most Reasonabley request if it is
a favour I am always ready to confer
favours if posible I do not answer the
name of John Holland Or Howland But
it matters not my name is. Benj. Holland
But for any knowledge I could give would
Be pleasure for me I Have an artisian well
it is a good wel fine flow of watter But I
Have never Bin able to utelize all the Benifit
it mite afford in Irigating if there ware pipes
laid under ground the wel would do much
in rasing a crop of most any and Every
thing you mite plant But I do not farm
much as I am to old also I will Say
Most of the artisian wells in this Reach of Cuntry
afords the Best drinking watter this myter one
year agow our wells flowed so much we had
to put on Extra pipe the watter was so
high it rise 5 ft feet Bove surface in a Seven
inch pipe I will Say no more for fear I mite Say
more than I know yours most respectfull
Benjamin Holland
Losangeles University P.O. Cal

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Geo. Aikin.

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 11.

State: Cal.

---

1. What is the depth of your well in feet? 336 ft. What is the size of the pipe in inches? 7 inches. What was the cost of the well? 1000.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it?

I can not tell but it flows 1½ above the pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?

The measure was made by putting a square across the pipe

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

There has no crops been raised because the land does not need it

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

5-1-91.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Frank Johnson

P. O.: Florence.

County: Los Angeles; Page: 48; Line: 22.

State: Cal.

---

1. What is the depth of your well in feet? 97 Ft. What is the size of the pipe in inches? 4 in What was the cost of the well? 9 5 Dollars

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? 20

3. How was this measurement made, or, in other words, how accurate do you consider it?

it is Accurate

4. Has any of this water been used for irrigation? non. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

My land is Dam't i need no Water

C. O. P.—10m

v i. Could Water. 5. Acres
of Sandy land With dry
Well

[7-2148] 5/91.

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. J. G. Harshman

P. O.: Compton

County: Los Angeles; Page: 37; Line: 6

State: California

1. What is the depth of your well in feet? 100. What is the size of the pipe in inches? 4. What was the cost of the well? $100.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 10

5. What crops have been raised by the water from your well, and about how many acres of each?

Irrigation not needed except [illegible] of trees

Have raised corn Pumpkins Beets, Cabbage etc etc

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-31-, *1891.*

5/4/5/7

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Geo. A. Harris,

P. O.: Claremata,

County: Los Angeles; Page: 33; Line: 13

State: Cal

1. What is the depth of your well in feet? 147. What is the size of the pipe in inches? 7. What was the cost of the well? $195.50.

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? 15

3. How was this measurement made, or, in other words, how accurate do you consider it? This measurement was made by running the water in a 32 gal. bbl. which was filled in 2 min. but do not consider it very accurate

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 5

5. What crops have been raised by the water from your well, and about how many acres of each? 1 Acre Onions 1 acre. cabbage 2 a. potatoes 1 a. Truck.

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5/6 5/6

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 7-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr James Hay.

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 13.

State: Cal.

---

1. What is the depth of your well in feet? 193. What is the size of the pipe in inches? 7. What was the cost of the well? $300.00

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? Our mode of measuring, is placing a thin piece of iron edgewise across the pipe and the distance that the water rises

(3. How was this measurement made, or, in other words, how accurate do you consider it?)
the iron above the open pipe we call the flow the pipe being one foot above the surface of the ground, mine is 1½ inches

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? Six

5. What crops have been raised by the water from your well, and about how many acres of each?
one acre of alfalfa watered three times a year the other corn for one year. but since I have planted grape vines which do not require water

When I first came to this part of the county fifteen years ago we could grow nothing without irrigation but now we can grow all kinds of crops and trees without any irrigation. The change I attribute to so many wells being dug bringing so much water to the surface. Without our well we could not make a living here. with them we do well

Yours Truly

James Hay.

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5/5/6/6

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 7-30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm J. J. Arnett.

P. O.: Long Newhall.

County: Los Angeles; Page: 5; Line: 2.

State: Cal.

---

1. What is the depth of your well in feet? 85 ft. What is the size of the pipe in inches? 7 in. What was the cost of the well? #100 ft.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? It fills a 2 in pipe running constantly.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

The above is used for supplying the water for the town of Newhall.

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5/4/5

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Geo. K. Porter

P. O.: San Fernando

County: Los Angeles; Page: 6; Line: 3

State: Cal.

Several wells

1. What is the depth of your well in feet? from 70 to 230 What is the size of the pipe in inches? different sizes from 6 to 9 inches What was the cost of the well? Cannot state

2. Have you measured the water from your well? different occasions If so, how many gallons per minute flow from it? have not measured their flow as fully and the water developed by the wells

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? . If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each? Have used the water for citrous fruit purposes partially also for stock & domestic use

Geo K Porter

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5/11 5/11

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 31, 1891.

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Geo. McLaughlin

P. O.: Artesia.

County: Los Angeles; Page: 32; Line: 20.

State: Cal.

---

1. What is the depth of your well in feet? 98. What is the size of the pipe in inches? 4. What was the cost of the well? $100.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? 100 gallons

3. How was this measurement made, or, in other words, how accurate do you consider it? I measured it by the gallon by running it a hard vessel

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 10 acres

5. What crops have been raised by the water from your well, and about how many acres of each? 1 acre of water melons 2 potatoes 3 of onions 3 straw berries 1 in trees

C. O. P.—10m

Geo M. Laughlin

Van Wolf

5/12 5/12

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. George Palmer.

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 9.

State: California.

---

1. What is the depth of your well in feet? about 275' What is the size of the pipe in inches? 7. What was the cost of the well? about $300.00

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? it flowes 2½ in Over a 7 Seven inch Pipe four feat high from the ground

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

We Donot Irigate here as this is what is called Damp Land and does not need Irigating the way we mejus those wells is by the depth of the blow Over the Pipe wich is two and one half inches I should think it would blow about 75 to 100 Seventyfive to one hundred gallons per minit this being damp Land we donot need Water in the Summer for Our Crops if there is anything more you wish to know I will give all the information I can as far as I am able

Yours Truly

Geo Palmer

5/12 5/12

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Joseph Smith.

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 26.

State: California.

---

1. What is the depth of your well in feet? 130. What is the size of the pipe in inches? 7. What was the cost of the well? About 150 Dollars

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? I have not measured the flow of the well.

3. How was this measurement made, or, in other words, how accurate do you consider it? it is very irregular in its flow there being much more in Winter than there is in Summer.

4. Has any of this water been used for irrigation? Not much If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each? There is not much Water used for irrigation about Compton. as it is not considered necessary in this location.

C. O. P.—10m

Compton is situated in a low moist part of the Valley of Los Angeles So that it is not usual to do much irrigating. but on the Mase west of Compton it is practised to advantage. with good results.

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Wm A. Hall.

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 4.

State: California.

1. What is the depth of your well in feet? 132. What is the size of the pipe in inches? 7 inch What was the cost of the well? Don't Know

2. Have you measured the water from your well? I have not. If so, how many gallons per minute flow from it? —

3. How was this measurement made, or, in other words, how accurate do you consider it? —

4. Has any of this water been used for irrigation? none. If so, how many acres have been watered in any one season? —

5. What crops have been raised by the water from your well, and about how many acres of each? —

C. O. P.—10m

5/12 5/12

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. John G. Welsh

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 8.

State: Cal.

---

1. What is the depth of your well in feet? 281. What is the size of the pipe in inches? 6. What was the cost of the well? $770.

2. Have you measured the water from your well? yes (Not by gallons.) If so, how many gallons per minute flow from it? I cannot tell. It formerly flowed one inch

3. How was this measurement made, ~~or, in other words, how accurate do you consider it?~~ By placing a saw-blade on edge on top of the pipe, in the center. The distance it flows up on saw-blade is called the flow

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 2 or 3 - could have watered more but did not want to

5. What crops have been raised by the water from your well, and about how many acres of each? Have used the water principally to give my fruit trees a good start and to irrigate a small garden - The most of our field crops are raised without irrigation

C. O. P.—10m

Over

My well at first was 7 inches in diameter and about 97 ft. deep. The flow was quite small. I then had 6 inch pipe put down in it, and went to a depth of 281 ft. I am not now able to tell you the cost of each size of pipe seperately I only remember the whole cost. The cost was more than it ought to have been on account of some trouble with boring aparatus- The workman was not sufficiently skilled and did not perferate the pipe correctly in the different strata's of gravel - thus allowing the slits to fill to such an extent as to decrease the flow

Respectfully Yrs. &c

John G. Welch

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

5/14 5/14

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Chas. Bauer.

P. O.: Compton.

County: Los Angeles; Page: 97; Line: 16.

State: California.

---

1. What is the depth of your well in feet? a little over 100. What is the size of the pipe in inches? 7. What was the cost of the well? dont know.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

none.

C. O. P.—10m

The well just flows enough for household use, and to water the stock on the Ranch.

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4/1, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M Don A. DeWitt

P. O.: Artesia.

County: Los Angeles; Page: 33; Line: 3.

State: Cal.

---

1. What is the depth of your well in feet? one hundred ninty five. What is the size of the pipe in inches? Seven. What was the cost of the well? $285.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? never measured only by inches flowes three inches deep over top of pipe

3. How was this measurement made, or, in other words, how accurate do you consider it? top of pipe open take a hand saw & tend it up edge ways on pipe the water flowes up 3 inches on saw

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? Eighty

5. What crops have been raised by the water from your well, and about how many acres of each? uffalffa 45 acres corn 20 acres Beans 5 archard 6 Beet 5

C. O. P.—10m

Don A DeWitt

Water will flow 14 feet above the level of the ground

[7-2148]

Eleventh Census of the United States

AGRICULTURE

Read

T22 T22

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Rosius French

P. O.: Artesia Carmenita

County: Los Angeles; Page: 33; Line: 15

State: Cal.

---

1. What is the depth of your well in feet? 154. What is the size of the pipe in inches? 4. What was the cost of the well? $167.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it? by holding a square on top of the pipe the water rises 1¼ inches above the pipe

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? about 15

5. What crops have been raised by the water from your well, and about how many acres of each? corn, Alfalfa, Garden truck and pasture of Bermuda & wild grasses

C. O. P.—10m

The well consists of three strata the first at 110 feet which flowed 3/4 inch above the pipe the second at 147 ft which flowed one half inch above the pipe the 3d at 164 ft which was in rock fine sand that it did not amount to any thing. The only way that well around here are measured up with a square to see how high the water rises above the pipe

B G Lynch

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5/26/27

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm. Robt. Panning

P. O.: Artesia.

County: Los Angeles; Page: 33; Line: 12.

State: Cal.

---

1. What is the depth of your well in feet? 238 ft. What is the size of the pipe in inches? 7 in. What was the cost of the well? $400.

2. Have you measured the water from your well? yess. If so, how many gallons per minute flow from it? about 1 gal per second

3. How was this measurement made, or, in other words, how accurate do you consider it? by the watch and by holding a 4 gal bucket under the spout as it runn out of bot that is set over the pipe

4. Has any of this water been used for irrigation? yess. If so, how many acres have been watered in any one season? This well will water 20 acres

5. What crops have been raised by the water from your well, and about how many acres of each? Alfalfa Corn trees and promiscus crops that we grow on our land

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 31, *1891.*

5/9

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Jno Wildason

P. O.: University.

County: Los Angeles; Page: 45; Line: 5

State: Cal.

1. What is the depth of your well in feet? 2 wells 71 ft. deep one 78 ft. deep What is the size of the pipe in inches? 7 in. dia. What was the cost of the well? about one dollar & 50 per ft.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? Perhaps 100 gallons per minute from each

3. How was this measurement made, or, in other words, how accurate do you consider it? Guess-work

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? I think I can irrigate ten.

5. What crops have been raised by the water from your well, and about how many acres of each? I expect to irrigate orchard mostly.

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C. April 1, 1891.

6/4

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Frederick Thompson

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 7.

State: California.

---

1. What is the depth of your well in feet? 190. What is the size of the pipe in inches? 7. What was the cost of the well? About $300, or

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? The flow is 1¼ inches

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season? Has not been needed

5. What crops have been raised by the water from your well, and about how many acres of each? on account of plenty rain during the past winter

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

6/5

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Augustus F. Sproul,

P. O.: Artesia,

County: Los Angeles; Page: 83; Line: 4

State: Cal.

1. What is the depth of your well in feet? 100 ft. What is the size of the pipe in inches? 7. What was the cost of the well? $300.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? 10.

3. How was this measurement made, or, in other words, how accurate do you consider it? the well one 3/4 inches open flow

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 10.

5. What crops have been raised by the water from your well, and about how many acres of each? alfalfa hay 40 tons

Augustus F. Sproul

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/6

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Israel Foster,

P. O.: ~~Artesia~~ Carmenita

County: Los Angeles; Page: 33; Line: 21.

State: Cal.

---

1. What is the depth of your well in feet? 120. What is the size of the pipe in inches? 7. What was the cost of the well? $115 one Hundred & Fifteen

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

my well is a light flow only for Household use & for Stock. my land does not need Irrigation. there are wells in this Section from #3 to 400 ft that flow enough to Irrigate a large tract of land dont know how much am not Posted with regard to the matter

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

6/6

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar 31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Frank B. Slaughter

P. O.: University.

County: Los Angeles; Page: 45; Line: 8

State: Cal.

1. What is the depth of your well in feet? 200. What is the size of the pipe in inches? Seven. What was the cost of the well? 600.

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? 900 Gallons in Twenty four hours

3. How was this measurement made, or, in other words, how accurate do you consider it? by gallon measurement

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

F R Slaughter

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C. April 1, 1891.

6/8

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Walter S. Harper

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 17.

State: California

1. What is the depth of your well in feet? 97 ft. What is the size of the pipe in ~~6 in~~ inches? 6. What was the cost of the well? one dollar a foot.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 10 acres ~~water surface~~

5. What crops have been raised by the water from your well, and about how many acres of each? 10 acres corn & Barley. Water sufficient to irrigate 100 acres. A long Adobe or square but little water

C. O. P.—10m

W. S. Harper Jr Dec

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

6/6

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Ella Riddle,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 9

State: Cal.

---

1. What is the depth of your well in feet? 88 feet. What is the size of the pipe in inches? 4. What was the cost of the well? $80, Eighty Dollars

2. Have you measured the water from your well? no, If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

there has been no crops raised from the watter, it is used for house hold purposes, and runs off in dicthes

Resp Mrs Ella Riddle

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-21, *1891.*

6/6

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. John Murphy

P. O.: Compton.

County: Los Angeles; Page: 28; Line: 27.

State: Cal.

1. What is the depth of your well in feet? 170. What is the size of the pipe in ~~7~~ inches? 16 Iron. What was the cost of the well? for pipe $65.00 Per 100 feet ~~for sinking and casing~~.

2. Have you measured the water from your well? yes. If so, how many gallons about 100 per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? by running it in to small trough to measure it

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

Compton Los Angeles County Cala May 24 / 91

Robert P. Porter Esq.

Dear Sir I got this Circular from you April ~~1ST~~ 7 I would have answerred it before now but I waiting to put down nother well then let you Know all about the 2 Wells the well I had with Mr Kelsey the Census Taker was here in June 1 ST 1890 is not much good the cost of Sinking wells in Los Angeles & most all over the State of Calporma is about as fallows & if anny one Say otherwise the are rong 7 in 16 iron 65 cts Per Joint 2 put 10 in each Joint the pipe is put in the ground Double one Joint inside the other So 2 Joints 4 put long counts but 2 put its got to be put in the ground this way & push it in the Well borer Mr Putney thats bin puting wells down in this Caunty for 35 years Put mine Down he charges fifty (50) cents Per foot for the ferst 100 put and 25 cts adeson for the next 50 put & so on 25 raise every 50 put & meane in every foot my Well is 170 put Dup & cast me one Hundred and forty five Dollars to Sink it and one Hundred and ten Dollars & 50 cts for the pipe I board the hands while Sinking that that I dont Count my other well is not down yet we got Stuck at 113 put as I have Said all ready 7 in 16 iron 65 cts Joint 7 in 14 iron 75 cts Joint 7 in 12 iron 1.00 Dollar Joint 6 in & 4 in 10 cts less for each Joint

I remaine your humbel Servant

John Murphy

PS the gravel Strollers here under ground is as crucket as rams Horn

J. M.

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: John & Baker Mr Jno. Baker

P. O.: ~~Artesia~~ Santa Fe Springs

County: Los Angeles; Page: 32; Line: 28.

State: Cal.

---

1. What is the depth of your well in feet? 270 ft. What is the size of the pipe in inches? 7 Inches. What was the cost of the well? $600.00.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it? It flows one quarter of an Inch over the seven Inch pipe, Tubing "

4. Has any of this water been used for irrigation? It has. If so, how many acres have been watered in any one season? It will only Irriate three acres in the summer season, We dont use it in winter

5. What crops have been raised by the water from your well, and about how many acres of each? Two acres of Alfalfa and One of Corn If properly arranged & piped would water Eight Acres of Orchard in the summer season

Said well is Sulpher Water
and has to be left in a reservoir
for two days, to allow the Sulpher to
evaporate be-fore useing

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

6/9

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm. H. Smith,

P. O.: Artesia,

County: Los Angeles, ; Page: 33 ; Line: 26.

State: Cal.

---

1. What is the depth of your well in feet? 283. What is the size of the pipe in inches? 7. What was the cost of the well? $677.75.

2. Have you measured the water from your well? I have not. If so, how many gallons per minute flow from it? It flows very little the last we got Struck

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

I have one well 9.7 ft deph
7 inch pipe
Cost $93.75
no 3 is one hundred and sixty
eight feet 7 inch pipe and
Cost $190.50 these wells are
single pipe with collar
the three wells flow about
three powells of an inch

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 31, *1891.*

6/10

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Justus Williams

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 1

State: Cal.

---

1. What is the depth of your well in feet? 160. What is the size of the pipe in inches? 7 in in diameter. What was the cost of the well? $316.

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? it flows 2 inches high over the top of a 7 in pipe the pipe is 2½ feet above the surface of the ground if pipe was cut off at the surface of ground, it would increase the flow

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

Have never used the water from well for irrigating purposes, as it is located on damp land

C. O. P.—10m

9/9

In this section, known as the Austrian belt, we are seldom obliged, to go deeper than 175 ft for a good flow but on the slopes north & east of Los Angeles, they found, in several places to a depth of 1500. ft without success.

6/10

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mrs Sidley Peck.

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 20.

State: California.

---

1. What is the depth of your well in feet? 160. What is the size of the pipe in inches? 6. What was the cost of the well? 400.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? don't know
it furnishes all the water for 2 families

3. How was this measurement made, or, in other words, how accurate do you consider it?
a Meer I talk that is all the use we
have of it a Surplus besides

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season? never used for that purpose

5. What crops have been raised by the water from your well, and about how many acres of each? none
we do not irrigate here
S. L. Peck

C. O. P.—10m

6-23-91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 6-23, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mrs Philemon Tedder,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 29.

State: Cal.

---

1. What is the depth of your well in feet? 130 feet. What is the size of the pipe in inches? 4 in pipe. What was the cost of the well? $130,00.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? it Measures 1½ one and one half (Measures inches) I do not know how many gallons

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? about 10 acres

5. What crops have been raised by the water from your well, and about how many acres of each? My place is used for a pasture, I think I could irrigate my 20 acres with my well

C. O. P.—10m

Philmon H Decker

Norwalk

Los Angeles Co

California

7/8/7/8-91.

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Louis Flamnas
Mr Henry Harris

P. O.: Florence.

County: Los Angeles; Page: 40; Line: 1.

State: Cal.

---

1. What is the depth of your well in feet? 58. What is the size of the pipe in inches? 7. What was the cost of the well? $100.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 18 A.

5. What crops have been raised by the water from your well, and about how many acres of each?
corn, potatoes, fruit, barley and alfalfa
18 acres in all.

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-31-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Benj. D. Walker,

P. O.: Pleasantwater,

County: Los Angeles, ; Page: 33 ; Line: 10.

State: Cal.

---

1. What is the depth of your well in feet? 110. What is the size of the pipe in inches? 4. What was the cost of the well? 100.00.

2. Have you measured the water from your well? No Sir. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

It flows enough water for 40 head of stock

C. O. P.—10m

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 25, 1895

Mr. Thomas Nelmes
Pasadena Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 8 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? On my own place I believe 25 feet in one place and 125 in another. higher land.

2. Are there any notably deep wells near you? No. An artesian sunk I believe 1000 ft without success. Another commenced near it, and surface water in abundance, so that the will is stopped temporary.

3. Do any of these flow—that is, are they artesian? No. but there are some a few miles off.

4. Have any deep wells been drilled or put down without obtaining water? Yes the one refered to above

5. Is there any difficulty in obtaining water by wells of moderate depth? Not in certain districts, thus each side of my low land at 20. and 35 feet.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Good quality, soft.

7. Is there an ample supply, or can the wells be easily exhausted? Never heard of their being exhausted.

8. What kind of machinery, if any, is used to raise the water? Windmills and in some cases gasoline engines

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? sometimes. but in this particular district there is suffient from one source. springs in the mountains. piped from higher land.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection, and also add the names and addresses of persons who can probably give other information of value.

Artesian wells exist in the San Gabriel Valley and flow freely, and near the coast, more of them. There is considerable alkali near the low lands. and considerable sulphur between Los Angeles and San Diego, all along near the sea. and in some places near the mountains, thus San Bernadino is inland, and near the mountains, has artesian wells. and alkali. There are warm springs up in the mountains, near there, temperature about 200° to 212°? can boil food in it, I have never tested the temperature of the water but is said to be 212°. The altitude of this place "Arrowhead" I make about 2000 ft.

Judge Eaton. South Pasadena. California has a good practical store of information on this subject. he has lived here for 30 to 50 years. is practical as well as intelligent on this subject.

Willial Thomson. Pasadena. California is well informed on this subject.

Respectfully yours

Thomas Nelmes.

PASADENA BOARD OF TRADE BUILDING.

PASADENA

GEM CITY OF SOUTHERN CALIFORNIA.

Brief statement of the location, climate, scenery and residence attractions of the city of Pasadena, Southern California, prepared by the Pasadena Board of Trade, November 10. 1893.

THE charming city of Pasadena is built upon a mesa or gentle slope of table land 850 feet above sea level, 25 miles from the Pacific coast which it overlooks on the west and south, and nine miles from the summit of the Sierra Madre range, 6000 feet high, which shelters it on the north. The view to the eastward extends to the snowy peaks of San Bernardino and San Jacinto, 70 to 100 miles distant.

The city is situated upon the so-called "Crown" of the San Gabriel valley. This broad and beautiful valley has been termed the Lombardy of America, on account of its fine scenery, perfect climate and variety of productions.

The climate is nearly an ideal one all the year round. In the summer an unclouded sky and a gentle zephyr from the ocean clear the air of all exhalations, leaving it pure and exhilarating, seldom excessively warm, and nearly always agreeable. In the winter the rainy spells, lasting but a few days at a time, are followed by several days or weeks of bright sunshine, and the fields and hills are covered with verdure, spangled with flowers, and present a spring-like appearance from December to May.

In his work on "Pasadena Illustrated," Mr. T. P. Lukens conservatively remarks: "Invalids can be out-of-doors nearly all the time. People come to our country in poor health and recover; many others come who do not, having stayed in the cold climate of the East too long, business and family ties having kept them away until disease had taken a death hold on them. Remember, neither this nor any other climate can put new lungs into you. Our mild and equable climate, however, greatly assists nature in restoring strength to the body, and arrests consumption and throat troubles while in an incipient condition. Some very sick people rally for a while, their lives being lengthened, in many cases months, and sometimes years."

PASADENA HOMES.

PASADENA, with a city population of 8000, and an adjacent population of 3000 more, probably has a larger number of beautiful homes than any other city of equal size in the world. These consist of tasteful dwellings, located in the midst of ample, ornamental grounds.

Building improvements now under way amount in value to $552,400. Among them are dwellings ranging from $1000 to $30,000, a new and ornamental hall for the Throop Polytechnic Institute, and a costly and extensive addition to Hotel Green. Notwithstanding the numerous buildings erected during the current year there are fewer vacant houses than at any previous period in the history of the city.

The streets and avenues are broad, lined with cypress hedges and beautiful shade trees, and provided with many miles of cement walks. The city has a perfect sewerage system costing $165,000. Street railways furnish convenient access to all parts of the city. The principal business streets are now being paved with asphalt.

The spirit of improvement is seen in the large amount of street work recently accomplished and under way. Between January and September, 1893, there were 9,519 lineal feet of streets graded, 26,458 feet of curbing built, and 99,335 square feet of sidewalk laid, at a total cost of $40,000.

The principal avenues are fine driveways extending to the adjacent suburbs many miles in every direction.

An abundant supply of pure, cold, mountain water adds not a little to the healthfulness and pleasure of living in Pasadena.

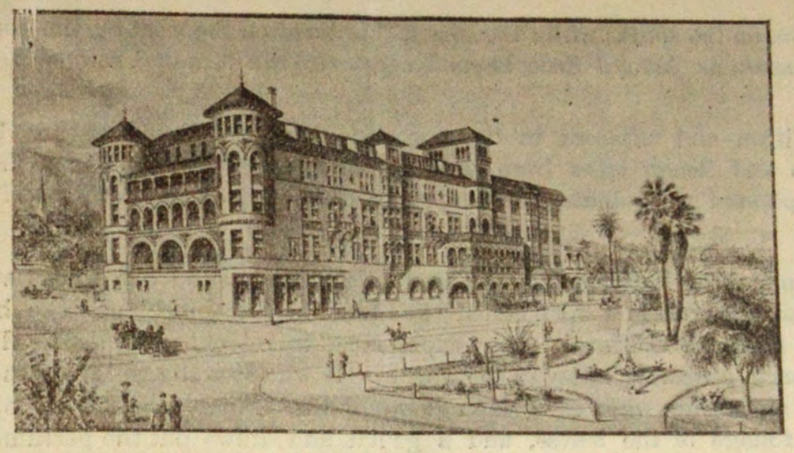
EDUCATIONAL FACILITIES.

THE educational advantages of Pasadena are unsurpassed. In the public school system 34 teachers are employed and 1485 pupils accommodated in five handsome buildings, costing $150,000. The attendance in 1893 exceeds that of 1892 by 156 pupils. The admirable High School fits its pupils for admission to the leading universities. These public schools are supplemented by excellent private schools. The Throop Polytechnic Institute, a noble institution combining a literary course with manual instruction, is the best college of its class west of the Mississippi River. It is liberally endowed by its founder, Hon. A. G. Throop, and occupies three large buildings, one of which, erected this year to meet increased demands for space, would be an architectural ornament to any city.

The Public Library is a handsome stone building, equipped with a well-selected library of books, maps and periodicals—the property and equipment being valued at $50,000.

No city of its size is better supplied with commodious and beautiful churches, representing all the leading denominations.

The Lowe Grand Opera House is a handsome and substantial structure, and contains one of the finest audience rooms in Southern California.



HOTEL GREEN, PASADENA, CAL.

HOTELS, BANKS, NEWSPAPERS, ETC.

THE prominent hotels are the "Green" and the "Balmoral" in the business center; the "Raymond" occupying a sightly mound on the southern border; and the "Painter" overlooking the valley from the northern mesa. Several other good hotels and numerous home like boarding houses are crowded from October to June with tourists lingering from a few days to the entire winter season.

Two national banks and one state bank are doing a safe and profitable business. Three good newspapers—the Daily Star, the Weekly Star, and the Weekly Crown Vista enlighten the public, while the various Los Angeles dailies reach their Pasadena readers half an hour after publication.

The citizens of Pasadena are public spirited, and united in promoting the general welfare. They are represented by a BOARD OF TRADE, numbering 160 active members, who frequently meet in a commodious hall to discuss matters of public policy.

RAILWAYS.

THE prosperous and growing metropolis of Los Angeles, nine miles southwest, containing 70,000 inhabitants, is connected with Pasadena by two steam railroads, running twenty well-patronized trains each way daily, indicating the business life and activity prevailing between the two cities. One of these roads is the Santa Fe overland trunk line, and the other is the Los Angeles Terminal railway. In addition to these a double-track electric railway, now building, is expected to be in operation in six months. All of these roads extend westward from Los Angeles to the various seaside resorts 18 to 25 miles beyond.

ADJACENT TOWNS.

THE flourishing little towns adjacent to Pasadena, are Altadena with its wealthy Chicago colony, La Canyada, La Crescenta in the beautiful Canyada valley, and Sierra Madre nestling at the mountain's foot, on the north; Olivewood, Fair Oaks, Lamanda Park and the park-like Santa Anita ranch, on the east; South Pasadena, Alhambra, and San Gabriel with its quaint old

mission, on the south; while the city is bordered on the west by the romantic glen known as Arroyo Seco, beyond which rise the dark and rugged Verdugo hills.

Within and adjacent to the corporate limits of Pasadena are 155,000 orange and lemon trees from three to fifteen years old, and there are 2500 acres planted to walnuts, olives, prunes, figs, apricots, and other deciduous fruits.

San Gabriel Valley, in which Pasadena and these suburban towns are situated, is described in a work called "The Land of Sunshine," as "the beauty spot of Southern California, many experienced travelers having declared it to be the most charming valley in the world. He who sees the valley for the first time at midwinter, when the golden globes of the orange nestle in the dark glossy foliage of the leaves, and a genial sun draws out the perfume of a myriad of flowers, while the dark, snow-capped mountains form a background to the picture, will admit that the praise is not overdrawn,"

PLEASURE RESORTS.

THE Mount Lowe Railway connects Pasadena with the Summit of Echo Mountain, five miles north in the Sierra Madre range. It ascends the foothills and penetrates Rubio Canyon, a deep and romantic gorge; climbs the steep mountain side to Echo Mountain 3500 feet high, by means of a great cable incline, and thence excellent bridle roads conduct the traveler, amid scenery beautiful and grand, to the summit of Mt. Lowe, 6000 feet above the sea, where a view of unrivaled sweep and magnificence embraces snowy mountain peaks, broad valleys, prosperous towns, orange groves, cultivated fields, and a vast stretch of the Pacific Ocean dotted with picturesque islands. These bridle roads will ultimately be replaced by a continuation of the electric road to Mount Lowe. Hotel Rubio in the canyon and the Swiss Chalet on Echo Mountain give ample accommodations to the tourist. The projector and builder of this mountain road, Prof. T. S. C. Lowe, intends placing upon the summit a finely equipped astronomical observatory. The atmospheric and climatic conditions are so favorable that the most brilliant scientific results may be anticipated.

Among other attractive and accessible resorts are Millard's Canyon, with its wild scenery and beautiful falls, about six miles north; Switzer's romantic camp in the rocky glen of the Arroyo Seco, where trout fishing may be indulged in; and Wilson's Peak, one of the Sierra summits 6000 feet high, and 15 miles to the northeast. The latter is reached by the Mt. Wilson Toll Road, a good bridle trail eight miles long skirting the deep mountain gorge known as Eaton Canyon, and has hotel accommodations at Martin's Camp and Strain's Camp, near the summit.

Additional information will be furnished by addressing the PASADENA BOARD OF TRADE.

WM. H. KNIGHT, Secretary.

CHARLES H. KEYES, President.

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr H T Parkinson

Azusa Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? about 100 feet. none less than 70 —

2. Are there any notably deep wells near you? the deepest that I know of is 250 feet.

3. Do any of these flow—that is, are they artesian? at present date no flowing water has been obtained here

4. Have any deep wells been drilled or put down without obtaining water? some

5. Is there any difficulty in obtaining water by wells of moderate depth? yes. The depth.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Generally yes — some salt water has been found. no alkaline.

7. Is there an ample supply, or can the wells be easily exhausted? There seems to be plenty of water at the above distance (100 feet)

8. What kind of machinery, if any, is used to raise the water? Wind mills —

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? can hardly say that it has as yet been used for irrigation

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

I may state that the water from wells has not been used for irrigation for two reasons. first on account of the expense of pumping water from a great depth. and second because there has been a fairly plentiful supply of river water which has been obtained at a low cost from the San Gabriel River.

The river was quite short last year in the summer when every drop of the water was used for irrigation, I kept a careful record of the total flow of the river from May 9th to November 9th. as I had charge of all the headd irrigating canals during that period and can give you any information in that line that you want if it would be of use to you.

APR 10 1895

Respy.

H. F. Parkinson

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 25, 1895

Mrs Gertrude L. Rose
Pasadena Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 12 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? no wells water piped from springs

2. Are there any notably deep wells near you? one boring of 1200 no water

3. Do any of these flow—that is, are they artesian? no

4. Have any deep wells been drilled or put down without obtaining water? yes one to my knowledge

5. Is there any difficulty in obtaining water by wells of moderate depth? one well of 56 feet depth has 20 feet water

6. Is the water of good quality; is it hard or soft, alkaline or salty? excellent soft

7. Is there an ample supply, or can the wells be easily exhausted? ample

8. What kind of machinery, if any, is used to raise the water? windmill

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? both

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

My home is in the city. the well 56 feet deep is on a lower level about ½ mile away - about 4 miles South there are flowing artesian wells

Gertrude Rose

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 25, 1895

Mr. W. S. Welch
Lancaster ~~Newhall~~ Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 12 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? From 3 feet to 200 feet

2. Are there any notably deep wells near you? 800 feet – the deepest

3. Do any of these flow—that is, are they artesian? There are 85 artesian wells in this section

4. Have any deep wells been drilled or put down without obtaining water? Yes towards the foothills

5. Is there any difficulty in obtaining water by wells of moderate depth? No.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Yes – Soft

7. Is there an ample supply, or can the wells be easily exhausted? Inexhaustible supply

8. What kind of machinery, if any, is used to raise the water? Common pumps for surface wells

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Domestic supply & Irrigation.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

With Lancaster as the center we have an artesian belt about 12½ by 6 miles or 80 square miles where flowing wells are easily gotten. This is the Antelope Valley which is on the south ~~West~~ of the Mojave Desert. Along the foothills surface wells are deep — often 200 feet. On this plane surface water is gotten at depths of from 5 to 20 feet in large quantities

Yours cordially

W. S. Melick

Editor of the Gazette

Lancaster Cal

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27 1895

Mr James E Haggar
Clear Water So Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 2 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? Surface wells are 10 feet. Artesian average 100 feet

2. Are there any notably deep wells near you? there has been a few bored 4 and 5 hundred feet. but they did not get any flow as

3. Do any of these flow—that is, are they artesian? they are nearly all Artesian

4. Have any deep wells been drilled or put down without obtaining water? they have. all of the flowing wells are about 100 feet

5. Is there any difficulty in obtaining water by wells of moderate depth? No. nearly every one that trys for one, gets one

6. Is the water of good quality; is it hard or soft, alkaline or salty? it is a little hard but very good quality otherwise.

7. Is there an ample supply, or can the wells be easily exhausted? there is an Ample supply

8. What kind of machinery, if any, is used to raise the water? the is few people use an engine. they get a larger flow that way

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? it is used more or less for irrigation. besides domestic use

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

There are some wind mills used here they work very well because we have a regular afternoon breeze from the ocean wich is 15 miles away.
The surface water is very much alkalied, but artesian is very good.

Mr. Jack Bramlet may give you more information, as he is a well borer. his Post Office is at. downey. Los angeles. Co.

Yours Respectfully James. C. Hagar.

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr J A Maddock
Duarte Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 12 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? 5 To 275 feet

2. Are there any notably deep wells near you? No

3. Do any of these flow—that is, are they artesian? No

4. Have any deep wells been drilled or put down without obtaining water? No

5. Is there any difficulty in obtaining water by wells of moderate depth? Yes - Depends upon locality

6. Is the water of good quality; is it hard or soft, alkaline or salty? Yes - generally hard I believe

7. Is there an ample supply, or can the wells be easily exhausted? There is an ample supply where the main underflow is struck

8. What kind of machinery, if any, is used to raise the water? The only machinery that I know of in vicinity is a small gasoline engine

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? For Irrigation on a small scale

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

This locality is in the San Gabriel Valley & our domestic & irrigation supply is almost entirely from mountain streams and chiefly the San Gabriel River

There is a large underflow through the valley which comes within a few feet of the surface at El Monte eight miles from here & at a low elevation above Sea level & the depth of wells to reach water seems to correspond nearly to the elevation of the different localities above this point — Besides this main underflow there are underground springs from the mountains & when these can be located water is often obtained near the surface on the higher elevations —

Yrs truly

J A Maddock D.L.S.

Gervaise Purcell C E
San Gabriel

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr Archibald Thompson
Azusa Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. APR 12 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

3 – H – 95 Azusa Cal

1. What is the average depth in feet of the wells in the part of the county in which you live? from 50 to 125 ft deep

2. Are there any notably deep wells near you? yes one East of me about 1000 ft deep

3. Do any of these flow—that is, are they artesian? No

4. Have any deep wells been drilled or put down without obtaining water? No

5. Is there any difficulty in obtaining water by wells of moderate depth? No water under 50 ft near me But South I see 6 miles water is within 25 ft

6. Is the water of good quality; is it hard or soft, alkaline or salty? good quality soft no alkali nor salt

7. Is there an ample supply, or can the wells be easily exhausted? ample supply if sunk deep enough

8. What kind of machinery, if any, is used to raise the water? Wind Mills 2 or 3 steel Pipe

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? for both Domestic & Irrigation

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

This is what is Known as the Agusa Valley their is a Sheet of water under laying the whole Valley caused by the Sinking of the Mojave River almost the North by just the Percolation Through the Mountains to our Valley causing a Continued under flood or Sheet of water Passing under our Valley

Names of men who are able to inform you more about the water question than I can

Henry & Roberts to Agusa Cal

& Bennis. to verdi Cal

Fred Fiske Agusa

Respectfully yours

Arch Thompson

WELL RECORDS.

9—255.

MAY 7 - 1906

WELL SCHEDULE.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

Mr. Carthy Company, April 24, 1906
Los Angeles
Cal.

SIR:

In its study of the water resources of the United States, which this Survey is making with the view of publishing the results for the benefit of the people, an attempt is being made to obtain important facts relating to wells, whether flowing or not. As it is impracticable, on account of expense, to visit all places, the endeavor is made to extend and complete the information by correspondence. If you will aid in this work by furnishing the data requested in the following list of questions your assistance will be much appreciated. If you can not supply all the data, kindly answer such of the questions as you can, *a partial report being much better than none.*

Very respectfully,

CHARLES D. WALCOTT, *Director.*

Send reply in accompanying envelope, which requires no postage, to .....

---

1. Well is in Los Angeles County. The nearest post-office is Station K, Rural delivery 3, Los Angeles
   Distance of well from post-office 3 (Miles.) Direction from post-office South
   Locate by section if public land surveys exist: Township ....., Range ....., Section ....., Quarter .....
   If in town, give street and number South Park Ave and 64th St (just west of 11th) City limit.
2. Owner THE McCARTHY COMPANY Address 203 N Broadway Los Angeles
3. Driller Smith & Fish Address East 17th St, near San Pedro St. Los Angeles
4. Situation of well Plain (Hill, slope, plain, valley.) Elevation is about 165 feet (Above or below.) above the level of Sea (Sea, railroad station, lake, river.)
5. Type of well Driven (Dug, driven, bored, or drilled.) Year completed 1903 Diameter at top 12 inch At bottom 12 inch
6. Depth of well 125 feet Does it enter rock? No If so, at what depth? Large rocks at bottom
7. Depth to principal waterbed 70 feet Character of waterbed Fine gravel on top, pretty coarse down and tending to (Gravel, sand, clay, rock, etc. If rock, state kind.)
8. Were any other waterbeds or seams found? No If so, give depth of each. Total depth of water bed 70' 120 ft = 50 feet
9. Give sizes and lengths of casing 12 in 4 1/4 in 2 ft joints Length of strainer Same. Pipe perforated
10. Does water flow at surface without pumping? No If so, at what height does it now flow? .....
    Has it been tested to see how high it will rise? ..... If so, to what height? ..... What is its pressure? .....
    If not flowing, how near surface does it stand when highest? about 27 feet When lowest? about 31 feet
11. Is well pumped? Yes If so, by what? Hoy Hersch Centrifugal 45 H P Gasoline Engine (Suction, deep well, or force pump, steam, gasoline, air-lift, or windmill.)
12. Temperature of water at well mouth 65° Month taken Always Temperature at bottom Not known
13. Natural yield, if flowing ..... (Gals. per min.) Maximum yield by pumping 1500 (Gals. per min.) Water is lowered 18 (State number.) feet by pumping.
14. Has supply decreased or increased? Steady To what due? .....
15. Is flow or clearness of water affected by storms, winds, etc.? No If so, describe Spit for pump using Plant
16. Quality of water—hard, soft, salty, alkaline, iron, or sulphur bearing Hard soft Cost of well $600. Of pump $2000.
17. Is water used for drinking? Yes Washing? Yes Cooking? Yes Stock? Yes Manufacturing? No Irrigation? Yes
    If for manufacturing uses, state nature ..... If for irrigation, give crops 5 crops Alfalfa a year
    If used for public supply, give number of buildings and people supplied: Buildings ..... People .....
    Is it sold? Yes If so, for what purposes? Irrigation
    If used for purposes not mentioned, please name Will be used hereafter for Domestic Purposes
18. Describe interesting peculiarities of well, if any, on back of this sheet .....
19. Give **record** of beds passed through, **analysis** of water, names of other **well owners** or **drillers** on back.

Name of person filling out blank Edward P Tomkinson

Late owner of well

0-4 18798b20m7-05

9—185.

Los Angeles
MAY 17 1906

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

WELL RECORD.

Well is located 9 miles in a Westerly direction from Los Angeles Cal post-office in the ¼ of ¼ sec., T., R., in the State of

Owner Arcturus Oil Co Contractor Driller

Well begun Aug 4/1905, 190; completed Steel drilling 5/9, 1906

Rig used: Cable, ~~rotary, jet, or~~ Total depth 3471 5/9/06

Length of casing: ft. Diameter: in. from ft. to ft.; in. from ft. to ft.

WATER WELLS.

Completed well develops the following water-bearing strata: From ft. to ft.

from ft. to ft., from ft. to ft. Main supply from ft.

Completed well pumps gals. per min. Flows gals. per min. Quality

OIL AND GAS.

Pool or district Salt Lake field Well No. 5 on Arcturus Lease farm.

Well yields [Oil or gas.] Yield first 24 hours Initial pressure

Record sent by Arcturus Oil Co Address 424 Pacific Electric Bldg Los Angeles Cal

LOG OF WELL.

FROM—	TO—	CHARACTER OF MATERIAL. (State whether hard or soft, and give color.)	REMARKS. (Note especially depths and thicknesses of all water-bearing strata, height to which water from each layer rises, quality of the water from each, and yield in gallons per minute.)
		Well not yet finished — will be pleased to furnish detail of log upon completion.	
	get log		

19337b5m8-05

(Continue on opposite side of sheet.)

FROM—	TO—	CHARACTER OF MATERIAL.	REMARKS.

Los Angeles

Paper Examiner

City Los Angeles

Date DEC 15 1905 State Cal.

MINERAL PAINT FOUND.

In sinking an artesian well for the Miramar Land and Water Company, on Seventh street, Alamitos, the well borers ran through a twelve-foot ledge of blue mineral paint of the consistency of putty. The ledge or vein was struck at a depth of sixty-five feet, and it is possible that it might be reached by running tunnels into the land from the low land that borders on Alamitos bay. While the specimen that is on exhibition in the company's office is blue, it is said by mineral paint experts that, by a certain process of heating, any color may be obtained.

Water was struck before the paint was reached, but not flowing water, and the company will continue sinking to a depth of 1000 feet, where it is known flowing water may be obtained. The well will be used for irrigation purposes for the residents on the tract, the water to be free, and if the flow from the greater depth proves to be as abundant as expected, more wells will be sunk and an electric light plant will be installed to furnish light and power to Long Beach and intervening territory.

Water Department
of the
City of Los Angeles
209 Marchessault St.
Telephone Main 275
Telephone Home 275

Cal. F.

372.

Los Angeles, Cal. Nov. 7, 1904.

Co.

Mr. Charles D. Walcott,
Director U. S. Geological Survey,
Washington, D.C.

Dear Sir:-

Inclosed find a portion of "Los Angeles" topographic sheet on which is located the positions of the groups of wells used to supplement the water of the stream of the Los Angeles river which is the chief source of water supply for this City.

All of these wells are driven-cased wells 12 inches in diameter and were sunk by the California Drilling and Construction Co. of Los Angeles, California.

Group No. 1 consists of 5 wells in the flood plane of the river. The one closest to the hill side reached bed rock at about 50 feet while the one farthest out was sunk 150 feet to the rock, the intermediate ones showing a fairly uniform slope of the rock out into the valley.

The bedrock at this point consists of granite somewhat decomposed and belonging to the same body forming the portion of the adjoining hill marked xxx. All of these wells penetrate gravel exclusively and are pumped by a single No. 10 centrifugal pump having branches from its suction pipe extending down into them from the surface. Their combined capacity was nearly 7½ second feet for a period of about 3 weeks last summer, but as might be expected the river was found to have lost nearly this whole quantity within a distance of about 3 miles, before the plant had been in operation a week. The plant was designed however, with a view to obtaining clear water during periods of freshet and conse-

NOV 12'04- 47499

F. H. NEWELL.

Water Department
of the
City of Los Angeles
209 Marchessault St.
Telephone Main 275
Telephone Home 275

 Los Angeles, Cal.

quent roily water in the river.

Groups 2 and 3 are located immediately below the last diversion from the surface flow of the river. The water of the river is in summer time all taken out at this diversion point. The purpose of the wells was to recover as much as possible of the sub-flow that might be passing there. The closest in to the hill side of both those groups of wells, reach bed rock at about 100 feet, but it was found that the gravel lying immediately over the rock was in a tightly cemented condition yielding little water, and such as was yielded being highly sulphurous. The cementing material appears to be lime carbonate similar in composition to a stalactitic deposit that forms by seepage in the conduit tunnel of the waterworks that pierces the adjoining hill. The rock here consists of dark shales with a few strata of interbedded sand stone and is highly folded, dipping about 30 degrees the strike being approximately Northwest and Southeast.

The outer wells of these groups were carried down to a depth of about 150 feet without reaching bedrock and penetrated a few thin strata of bog clay.

The combined capacity of all these wells is about 10 second feet and have had the effect of drying up the water that reappeared in the stream bed below them.

In the 4th group shown to the South of the City of Los Angeles, there is but one well so far completed. It is the intention however, to put down three or four more wells at this point as the gravel underlying this region has proved quite prolific of water and its recession has been slow notwithstanding the large quantities pumped from it by irrigators

Water Department
of the
City of Los Angeles
209 Marchessault St.

Telephone Main 275
Telephone Home 275

362

C.D.W. - 3 -

Los Angeles, Cal.

during the past five or six years. The well just completed penetrated formations as follows: 20 Feet of soil and thence alternating beds of sand gravel and clay to a depth of 321 feet, the well being stopped in a clay bed which is known by former borings in that vicinity to be of very considerable thickness and broad extent.

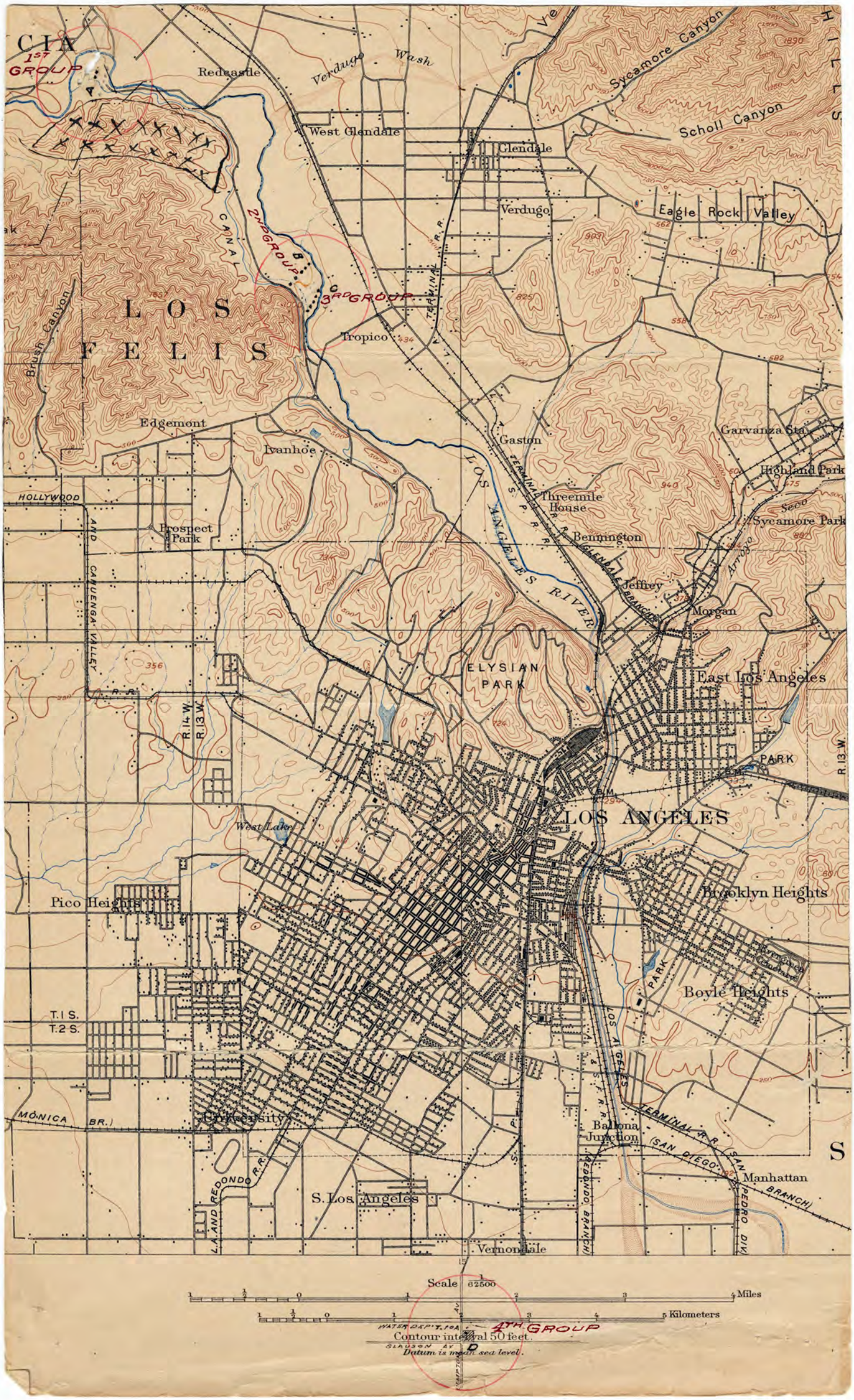
The water yielded by Groups 1, 2 and 3, is similar in quality, though slightly harder than that in the river which varies from 20 to 28 grains per gallon of dissolved solids, the quantity varying with the greater or less flow of the river. being naturally harder when the flow is scant

The water of the well in Group 4 is known to be harder, but no analysis has been had of it.

Yours very respectfully,

W^m. Mulholland

Superintendent.


1ST GROUP
2ND GROUP
3RD GROUP
4TH GROUP
Redcastle
Verdugo Wash
West Glendale
Glendale
Verdugo
Sycamore Canyon
Scholl Canyon
Eagle Rock Valley
CANAL
LOS FELIS
Brush Canyon
Tropico
T. R. R.
Edgemont
Ivanhoe
Gaston
Garvanza Sta.
Highland Park
Threemile House
Seco
Sycamore Park
Bennington
Prospect Park
HOLLYWOOD
AND CAHUENGA VALLEY R.R.
LOS ANGELES RIVER
S. P. R. R.
GLENDALE BRANCH
Jeffrey
Morgan
Arroyo
ELYSIAN PARK
East Los Angeles
PARK
R.14 W.
R.13 W.
West Lake
LOS ANGELES
Pico Heights
Brooklyn Heights
Boyle Heights
T.1 S.
T.2 S.
MONICA BR.
University
LA AND REDONDO R.R.
S. Los Angeles
Vernondale
Ballona Junction
TERMINAL R.R. (SAN DIEGO)
REDONDO BRANCH
SAN PEDRO DIV.
Manhattan
BRANCH)
Scale 1 62500
Miles
Kilometers
Contour interval 50 feet.
Datum is mean sea level.

ne ground is represented
map. This scale is used
r industrially important
For the greater part of
iate scale of 1:125000, or
inch, is employed. A
ale of 1:250000, or about
is been used in the desert

A few special maps on
limited areas in mining
the largest scale cover
longitude; those on the
latitude by 30′ of longi-
allest scale, 1° of latitude

n this map may, for con-
three groups: (1) *water*,
ponds, rivers and other
etc.; (2) *relief*, including
, cliffs, etc.; (3) *culture*,
h as towns, cities, roads,
. The conventional signs
re grouped below. Vari-
aps of earlier dates.
are shown in *blue*, the
als in full blue lines, and

The contour line at, say, 20 feet above sea level is the line that would be the seacoast if the sea were to rise or the land to sink 20 feet. Such a line runs back up the valleys and forward around the points of hills and spurs. On a gentle slope this contour line is far from the present coast line, while on a steep slope it is near it. Thus a succession of these contour lines far apart on the map indicates a gentle slope; if close together, a steep slope; and if they run together in one line, as if each contour were vertically under the one above it, they indicate a cliff. In many parts of the country are depressions or hollows with no outlets. The contours of course surround these, just as they surround hills. Those small hollows known as sinks are usually indicated by hachures, or short dashes, on the inside of the curve. The contour interval, or the vertical distance in feet between one contour and the next, is stated at the bottom of each map. This interval varies according to the character of the area mapped; in a flat country it may be as small as 10 feet, in a mountainous region it may be 200 feet. Certain contours, usually every fifth one, are accompanied by numbers stating elevation above sea level. Many other heights, instrumentally determined,

trict, and the names of adjoining
are printed on the margins. T
at five cents each when fewer th
purchased, but when they are
100 or more copies, whether of
of different sheets, the price is t

The topographic map is the b
facts of geology and the miner
quadrangle are represented.
and geologic maps of a quadr
bound together, accompanied by
the district, to form a folio of th
of the United States. The fo
twenty-five cents each, except s
ally comprehensive, which are p

Applications for the separ
maps or for folios of the Geolo
be accompanied by the cash
money order (not postage stamp
addressed to—

THE DIRECTOR,

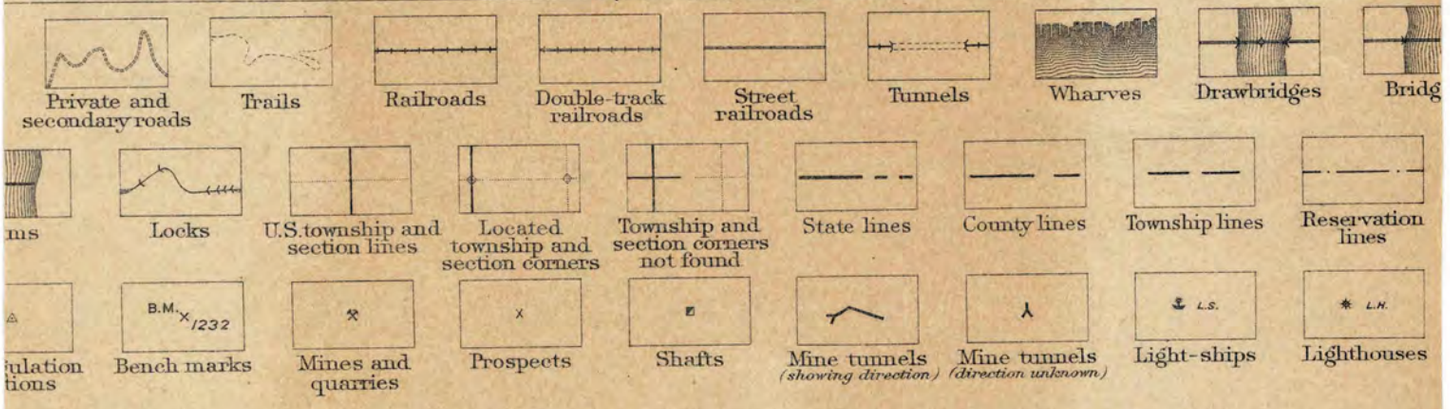
United States Geolog

Wa

September, 1899.

CONVENTIONAL SIGNS

CULTURE
(*printed in black*)



RELIEF
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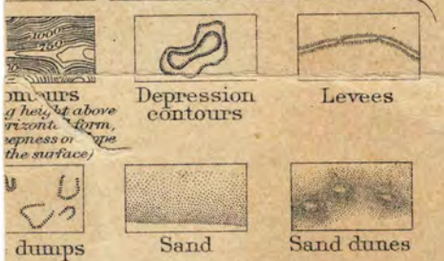
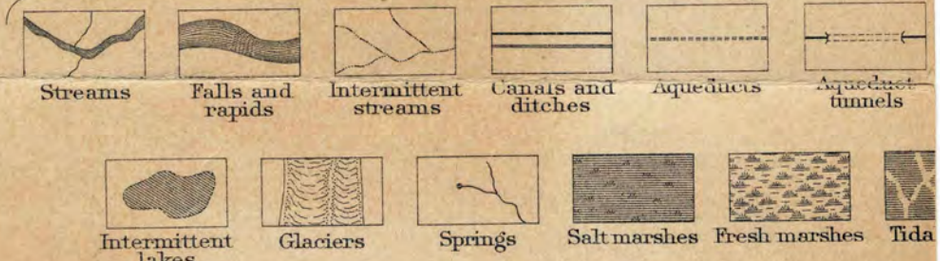


WATER
(*printed in blue*)



July 25, 1934

According to Mr.
H. T. Cory there are
logs of 3000 wells
on file with the University
of California at Los Angeles
which have been compiled
by Roscoe Moss. (Dillen
at L. A.)

G. M. Hall

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 9 1895, 189

Mr E Phelan
Pomona So Angeles Co Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. APR 30 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ------

2. In what year was your well completed? ------ What is size or diameter? ------

3. How was it put down; dug, driven, bored, or drilled? ------

4. What is the total depth in feet? ------ What was depth to water? ------

5. If well is cased, what is size and length of casing? ------

6. Does this well flow—that is, is it artesian? ------

7. If flowing, has the amount increased or decreased? ------

8. If not flowing, does depth of water vary at different times of year? ------

9. How much water can be obtained from the well? ------ Can it be easily lowered? ------

10. What is the quality of water, is it hard, soft, salty, or alkaline? ------

11. If not flowing, how is water raised? ------

12. What was cost of well? ------ Cost of pumping machinery? ------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? ------

14. Have you a record of the strata passed through? ------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

APR 30 1895

JUL 18 1895

Pomona. Cal.
April. 22nd 95

F. H. Newell Esq.,
Washington. D.C.

Dear Sir:- Yours of 9th inst. asking for information relative to artesian wells. receipt and contents noted. In reply will state I am not sinking wells, except for prospecting purposes, but am driving a tunnel to develop water for irrigation or domestic use. Below will be found a few facts concerning it which you may condense and use as you see fit.

1st.- Tunnel is located within city limits of Pomona which is about 30 miles east of Los Angeles.

2nd.- Will not be completed before next September or October.

3rd. Inside size is 4½ x 6 ft. and will be about 8000 feet long when completed

4th Greatest depth at upper end below ground will be about 75 feet.

5th Water will be discharged by gravity.

6th First 4000 feet of tunnel was in gravel at end of which before entering a rim-rock of granite, about 20 inches of water was struck at a depth of 40 feet; after passing through this rock an additional flow of about 50 miners inches was struck percolating through wash gravel and decomposed granite. Then another rim-rock of granite was encountered for a distance of about 500 feet and at present have just broken through this and tapped an immense area of water-bearing country. This last volume of water struck is about 75 miners inches and is a beautiful sight gushing from its stony prison. The remainder of the tunnel course all lies through

this water-bearing country which is directly tributary to the water shed of the Sierra Madre mts, thus insuring an inexhaustible supply. It is confidently expected that not less than 500 miners' inches of water will be depeloped on completion of the tunnel.

7th Water is very soft and pure.

8th Tunnel is timbered throughout with the best quality of Redwood and Oregon pine.

9th Estimated cost $75.000 00/100.

10th This tunnel is demonstrating the fact that Southern California has an abundant supply of percolating water which awaits the enterprising capitalist and promises him a rich reward.

Any other information you may desire I will be pleased to give

Respectfully Yours
E. F. Phelan
per W. P. D.

First-class Family House.
Roomy, Airy, Sunny and Pleasant.

Unsurpassed Surroundings.
Livery in Connection.

HOTEL ALHAMBRA,

M. FURSTENFELD, PROP.

JUL 8 1895

SEVEN MILES FROM LOS ANGELES ON S. P. RAILROAD. TWO MILES FROM PASADENA.

Fifty Rooms.
Charges Reasonable.

Alhambra, Cal., June 30th 1895

Mr F.H. Newell.
Washington D.C.

Dear Sir.

Being absent from home I cannot give you the desired information until I return home.

About the 10th July I will fill out blank received from you & will mail you same

Yours Respectfully

Ezra Taylor

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr D. W. Gilfillan
Tropico Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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JUN 7 1895

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

1. What is the average depth in feet of the wells in the part of the county in which you live? 80 ft.

2. Are there any notably deep wells near you? No.

3. Do any of these flow—that is, are they artesian? Yes. a few of them. but weak flow.

4. Have any deep wells been drilled or put down without obtaining water? No.

5. Is there any difficulty in obtaining water by wells of moderate depth? No.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Good. soft.

7. Is there an ample supply, or can the wells be easily exhausted? Most of them inexhaustible.

8. What kind of machinery, if any, is used to raise the water? Wind Mills & Gas Engines.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Below Artesian water could be had in many localities in this country by going to sufficient depths. Wells here rarely exceed 200 ft. Yours &c

D. W. Dorsey

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C. MAY 21 1895, 189

M. Walker Bros
University So Angeles Co., Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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JUN 11 1895

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

1. What is the location of your well? Township, 2 S of Range 14 W; range, ----; section 1, or distance from town, 3 Blocks

2. In what year was your well completed? 1890 What is size or diameter? Six inches

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 35 ft What was depth to water? 26 feet

5. If well is cased, what is size and length of casing? Six inches 35 ft long

6. Does this well flow—that is, is it artesian? No no artesian water in L.A.

7. If flowing, has the amount increased or decreased? ----

8. If not flowing, does depth of water vary at different times of year? Not much 2 to 4 feet

9. How much water can be obtained from the well? 1000 gal per day of 12 hours Can it be easily lowered? no

10. What is the quality of water, is it hard, soft, salty, or alkaline? Slightly alkaline

11. If not flowing, how is water raised? Lift pump

12. What was cost of well? $146.00 Cost of pumping machinery? $75.00

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Domestic only

14. Have you a record of the strata passed through? Clay to 10 feet Tul. gravel

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

We are well drillers (or borers) and have a wide acquaintance with the strata and formation in this section of country. In the city of Los Angeles and north of the city to the mountains also south of the city for about 2 miles and East ~~for about~~ ~~to the mountains~~ for some ~~distance~~ distance and west along the foot hills to the Pacific there is virtually no artesian water In the greater part of this district, especially in the city and southwest of the city to two & three miles there is water ~~in~~ obtainable for pumps wells the strata are first soil for from 4 to 15 feet then sand and ~~then~~ ~~clay~~ boulders from the size of a hens egg to the size of ~~a~~ ones head. These boulders are usually found largest near the surface 10 ft. from 15 to 40 ft and fifty feet then the sand gets finer as you go deeper and is very fine at 200 to 600 feet. The water level gets nearer the surface as you approach the ocean on the ~~West~~ west and at Los Angeles is about 30 ~~40~~ feet on an average. On the South the water level approaches the surface till you reach Compton then the ~~hills~~ ~~or higher~~ land rises making it deeper to water thus at Los Angeles it is 30 feet to water at mid way to Compton 20 ft at Compton 4 to 10 feet between Compton & Wilmington from 20 to 80 feet Now in this valley from two miles S of L.A. to Compton Artesian wells are found the strata are sand & muck sand, clay & gravel in the Artesian belt around Compton & Artesia From Los Angeles to Redondo Beach there is no artesian water and is deep to water ranging from 30 ft at L.A. to 60 feet at mid way to ocean and then shallower to ocean

For information of Compton Dist write Smith Well driller Compton Cal

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., MAY 10 1895, 189

Mr Richard Garvey
San Gabriel So Angeles Co. Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. JUN 7 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

1. What is the location of your well? Township, 1 S ; range, 11 W; section 25, or distance from town, Los Angeles 9 miles

2. In what year was your well completed? 1895 What is size or diameter? 7 inches

3. How was it put down; dug, driven, bored, or drilled? drilled

4. What is the total depth in feet? 223 feet What was depth to water? 197 feet

5. If well is cased, what is size and length of casing? all cased

6. Does this well flow—that is, is it artesian? it is artesian & flows

7. If flowing, has the amount increased or decreased? it has increased from 8 to 35 inches

8. If not flowing, does depth of water vary at different times of year?

9. How much water can be obtained from the well? 35 Miners inches Can it be easily lowered? yes

10. What is the quality of water, is it hard, soft, salty, or alkaline? soft & of the very finest quality

11. If not flowing, how is water raised? —

12. What was cost of well? about $450 Cost of pumping machinery? —

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? is used for both

14. Have you a record of the strata passed through? yes

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

This is a Well the facts about which I have already given the Government in a former report when it was not giving so much water as now. it was bored 2 years ago. it first gave 6 Miners inches afterwards 8, afterword it began to flow less, Last spring (1895) it was decided to sink it deper to see whether or not a greater flow could not be obtained, after merely cleaning the Well & without driving any pipe at all a flow of 35 inches was obtained & it still maintains that quantity, It is considered an extraordinary good Well.

There is another Well within 100 yards which flows about 12 Miners inches. it belongs to the Messrs Parkers & Haig to Whom I refer you. These Wells are 3 Miles South of San Gabriel Mission & 9 Miles East from Los Angeles I have 900 acres upon which I am sure certain 100 Similar Wells can be obtained

Very Respectfully

Richard Garvey

San Gabriel

Cal.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C. MAY 10 1895, 189

Mr Oscar Mathieu
Downey Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. JUN 7 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, Anaheim; range, ------; section ------, or distance from town, 3 miles

2. In what year was your well completed? 1895 What is size or diameter? two in

3. How was it put down; dug, driven, bored, or drilled? bored

4. What is the total depth in feet? 412 What was depth to water? first water 20 ft.

5. If well is cased, what is size and length of casing? two in. 19 ft casing

6. Does this well flow—that is, is it artesian? yes

7. If flowing, has the amount increased or decreased? increased

8. If not flowing, does depth of water vary at different times of year?

9. How much water can be obtained from the well? 3 inches Can it be easily lowered? No

10. What is the quality of water, is it hard, soft, salty, or alkaline? soft

11. If not flowing, how is water raised?

12. What was cost of well? 169.80 Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? irrigation & domestic

14. Have you a record of the strata passed through? 20 ft. 160 ft. 250 ft. 412 ft.

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

I have put down 24 of Tubler well of which 9 have flowed all within a radis of 6 miles Anaheim. some of which flows as much as 9 in. they are all at varies depts.

For ~~more~~

W. W. Wright of Downey.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., MAY 10 1895, 189

Mr Johann Bixby
Long Beach Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. JUN 7 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, 4 S. ; range, 12 W. S.B.M.; section 8, or distance from town, 1/4 mile N.E. Bixby station on Los Angeles Terminal R.R.

2. In what year was your well completed? 1894 What is size or diameter? 8 inches

3. How was it put down; dug, driven, bored, or drilled? bored

4. What is the total depth in feet? about 500 ft. What was depth to water? 12 ft to surface water.

5. If well is cased, what is size and length of casing? Eight inch pipe to the full depth

6. Does this well flow—that is, is it artesian? Yes

7. If flowing, has the amount increased or decreased? rather increased

8. If not flowing, does depth of water vary at different times of year?

9. How much water can be obtained from the well? 1100 gals per minute. Can it be easily lowered? Never been tried

10. What is the quality of water, is it hard, soft, salty, or alkaline? very soft.

11. If not flowing, how is water raised?

12. What was cost of well? $1100.00 Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Used for irrigation

14. Have you a record of the strata passed through? No.

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

There are other wells in the neighborhood of about the same capacity which have not reached the depth equal to this

Gen E. Boulon of Los Angeles can probably give you further information

Jotham Bixby

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., MAY 10 1895, 189

Mr W. W. Mc Cellum
San Gabriel So. Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. JUN 11 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, 1 S.; range, 12 W.; section 14, or distance from town, San Bernardino R.R. 1 mile South San Gabriel

2. In what year was your well completed? ____ What is size or diameter? 7"

3. How was it put down; dug, driven, bored, or drilled? ____

4. What is the total depth in feet? 183 What was depth to water? about 65 ft surface water. 183 ft bottom water

5. If well is cased, what is size and length of casing? ____

6. Does this well flow—that is, is it artesian? No

7. If flowing, has the amount increased or decreased? ____

8. If not flowing, does depth of water vary at different times of year? ____

9. How much water can be obtained from the well? Can pumping 7000 gal for Hour. Can it be easily lowered? Has lowered it 14½ ft

10. What is the quality of water, is it hard, soft, salty, or alkaline? Sweet Clear. Soft.

11. If not flowing, how is water raised? by pump worked by 8 H.P. Gas engine

12. What was cost of well? ____ Cost of pumping machinery? engine $700.00 pump $110.00

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? irrigate 30 acres of Orange orchard.

14. Have you a record of the strata passed through? 1st 50 ft. was. Sandy soil with layers of course grit. The water is in coarse gravel overlying which is 90 ft of clay.

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

This well was originally a 7" driven well 183 ft. deep, water coming within 50 ft. of surface - from which was pumped 3200 gal pr Hour - a shaft 4×5 ft has been sunk to water level, and a large force pump placed at the bottom from which we are now pumping 7000 gal pr hour. which lowers the water 14½ ft. last years cost of pumping was about 60¢ pr day gasoline at 12¢ pr gal. this was before the larger pump was put in. since the rise in the price of gasoline we are using oil from the wells here at Los Angeles. which is much cheaper.

This well will be given a sever test as to its capacity in water during the summer irrigation, and also as to the success of the various local oils in generating power for the gas engines. I should be glad to send you the results later in the season should you desire them.

J Rodney Abbot Box 24 San Gabriel California

The above report is more full and complete than anything I could give you. This well is within three hundred yards of mine.

Respectfully

W. McCollum.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., ____, 189__

Mr B. A. Eaton
South Pasadena Los Angeles Co., Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

JUN 15 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ____; range, ____; section ____, or distance from town, Have none

2. In what year was your well completed? ____ What is size or diameter? ____

3. How was it put down; dug, driven, bored, or drilled? ____

4. What is the total depth in feet? ____ What was depth to water? ____

5. If well is cased, what is size and length of casing? ____

6. Does this well flow—that is, is it artesian? ____

7. If flowing, has the amount increased or decreased? ____

8. If not flowing, does depth of water vary at different times of year? ____

9. How much water can be obtained from the well? ____ Can it be easily lowered? ____

10. What is the quality of water, is it hard, soft, salty, or alkaline? ____

11. If not flowing, how is water raised? ____

12. What was cost of well? ____ Cost of pumping machinery? ____

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? ____

14. Have you a record of the strata passed through? ____

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Over

We have no Artesian wells about Pasadena. Our water supply comes by gravitation. A true well was bored to the depth of 1100 ft. Surface water was found at 56 ft. The entire distance after passing a few feet of soil consisted of mountain debris evidently a fill - the original formation never having been reached. A few miles east of us there is a very narrow Artesian belt where flowing streams have been obtained at depths varying from 60 to 150 ft. The formation below is stratified the strata entirely of very compact clay impervious to water - generally from 15 to 25 inches in thickness. Every strata pierced increased the flow. No very large flows have ever been struck in this County, & I do not know of an Artesian well having been a success here where they had to go over 26 ft to strike surface water. Nearly all the flowing wells are on "ciénega" lands, that is lands that are semi moist & produce crops without irrigation in summer season.

L. J. Rose. E. J. Baldwin. & De Barth Shorb (P. O. address Los Angeles Cal,) have all had experience in Artesian well-boring & could probably supply you with information on the subject.

Very Respectfully yours

Wm S. Eaton

Mr F. H. Newell.
U.S. Geological Survey

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION

WASHINGTON, D. C., MAY 21 1895, 189

M S. W. Holt
Los Angeles Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

JUN 17 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the country in which you live?
From 100 to about 600 feet as a rule.

2. Are there any notably deep wells near you? No sir.

3. Do any of these flow—that is, are they artesian? ——

4. Have any deep wells been drilled or put down without obtaining water? None that I know of ——

5. Is there any difficulty in obtaining water by wells of moderate depth? No if the wells are just down in artesian lands.

6. Is the water of good quality; is it hard or soft, alkaline or salty?
Usually of good quality ——

7. Is there an ample supply, or can the wells be easily exhausted?
The supply is permanent except for many wells are just down in close proximity.

8. What kind of machinery, if any, is used to raise the water?
Sometimes hand pump sometimes steam power.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation?
Water used for domestic use stock and irrigation.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

2686b5m

Write to Matthew Gage, Riverside.
F. C. Finkle, San Bernardino.
P. L. Griffin Hemet,
Gen. Geo. E. Boulton, Los angeles.
S. D Compton Los angeles-
O. E. Newman Riverside
R. B Taylor. Santa Riverside.

Richard Dist. Clerk.
Hon. J. E. McClemas. Pomona
Rue Anderson, Palms.

Yours truly
R. M. Neal

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., ..., 189...

M Hon J. De. Borth Shore.
San Gabriel Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. JUN 18 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, 3 miles

2. In what year was your well completed? 1893 What is size or diameter? 12 inches.

3. How was it put down; dug, driven, bored, or drilled? The well was drilled.

4. What is the total depth in feet? 300 What was depth to water? about 20 ft.

5. If well is cased, what is size and length of casing? length of Casing 300 ft size 12 in.

6. Does this well flow—that is, is it artesian? it is artesian

7. If flowing, has the amount increased or decreased? increased 5 inches

8. If not flowing, does depth of water vary at different times of year? it flows continualy.

9. How much water can be obtained from the well? 32 inches Can it be easily lowered? No.

10. What is the quality of water, is it hard, soft, salty, or alkaline? quite soft.

11. If not flowing, how is water raised? ——————

12. What was cost of well? $800 dollars Cost of pumping machinery? ——————

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? It is used for both domestic and for irrajating.

14. Have you a record of the strata passed through? First Clay. 2 cement gravel and alternating every 20 ft between the whole length

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

The record of this well is some what similiar to that of 16 other wells, not ½ mile distance That I have bored in the last 8 years, going through the same composition, and attaining the same flow. All of them are flowing still. They are in the So called. Cienega Belt that extends from Mud Springs to Mud Pass some twenty five miles distance And twenty five miles east of San Gabriel through Flo Cavenga Pass, and twenty miles West of it. The following names which I will give you, might give you some valuable information. George S. Patton Solomon Richardson, Suizenike Buchosky S. L. Tilis All of San Gabriel, Calif.

Hoping this information may help you out

Yours Truly.

L. De. Lauth Sherb.

Per Lemphere Sherb.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., MAY 10 1895, 189

M Hon E W. Ross
Los Angeles Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

JUN 3 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ------

2. In what year was your well completed? ------ What is size or diameter? ------

3. How was it put down; dug, driven, bored, or drilled? ------

4. What is the total depth in feet? ------ What was depth to water? ------

5. If well is cased, what is size and length of casing? ------

6. Does this well flow—that is, is it artesian? ------

7. If flowing, has the amount increased or decreased? ------

8. If not flowing, does depth of water vary at different times of year? ------

9. How much water can be obtained from the well? ------ Can it be easily lowered? ------

10. What is the quality of water, is it hard, soft, salty, or alkaline? ------

11. If not flowing, how is water raised? ------

12. What was cost of well? ------ Cost of pumping machinery? ------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? ------

14. Have you a record of the strata passed through? ------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

I have no well on any of mine

property, that I think the following named gentlemen can give you information of value upon the subject:

Fred. Eaton, Civil Engineer, Los Angeles, Cal.
B. S. Eaton, Pasadena, Los Angeles Co. "
Hon. J. de Barth Shorb, San Gabriel, " "
Genl. E. Boulon, Los Angeles, " "

Respectfully

E. Mc Rose

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., MAY 21 1895, 189

Mr Putney
Florence So Angeles Co Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. JUN 3 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, 7 miles South of Los Angeles

2. In what year was your well completed? 1872 What is size or diameter? 7 in dia

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 160 What was depth to water? 10 feet

5. If well is cased, what is size and length of casing? Cased the whole debth 7 in Casing

6. Does this well flow—that is, is it artesian? artesian flows about 12,000 gallons per hour little in Summer

7. If flowing, has the amount increased or decreased? Holds about and decreases a little

8. If not flowing, does depth of water vary at different times of year?

9. How much water can be obtained from the well? Can it be easily lowered?

10. What is the quality of water, is it hard, soft, salty, or alkaline? Good - a little hard

11. If not flowing, how is water raised?

12. What was cost of well? about $2450 Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Irrigate 30 acres I can irrigate direct from well the 30 acres in two weeks

14. Have you a record of the strata passed through? the first 90 feet is an alluvial wash from 90 feet to 160 a course Gravel strata full of water Impervious

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

I have followed Artesian well boreing since 1856 I find the Stratas vary very much in the same location The Valleys near the Coast are of a very recent formation - Composed mostly of Debris & Wash - often find Petrefaction & decomp. Wood - Shell &c at the debth of from 1 to 500 feet & deeper - There can be a great deal of water developed from the Cannon by Submerged dams - Tunneling into the Mountains of the Coast Range &c - There are a great many recently Putting in Pumping Plants for Raising water where they have a good supply of water - they find it preferable to buying water of these water Companys I am putting down a Plant at the Present time for a Private Party at a Cost of about $3000. Reservoir Pump Engine &c have to raise water from bored Wells have to bore about 250 ft deep they all varry in debth I also Put down a well for another Party - had to bore 325 feet deep with a shaft Sunck to the debth of 30 feet the water raises in this shaft about 8 feet So he Submerges his Pump - he raises about 70 miners inches of water with a #6 - Centrifugal Pump - with a 20 Horse Boiler & Engine at a Cost of two dollars pr day (or about) there is a great many adopting that Method for Irigation

Respt'ly

A. J. Putney

A. J. BRAMLETTE,

WELL BORER

CONTRACTS FOR SURFACE AND ARTESIAN WELLS SOLICITED.

2, 4, 5, 6, 7 AND 9 INCH WELLS BORED.

Also Hydraulic and Tubular Wells Bored.

DOWNEY, CAL.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

WASHINGTON

OFFICE OF THE DIRECTOR

Gentlemen:

In 1918 public utility electric-power companies submitted schedules to the United States Geological Survey showing the equipment of each of their power plants on December 31, 1917. It is desired to bring this information up to date. For this purpose I inclose schedules for reporting information in regard to the equipment of each of the power plants operated by your company and some general information in regard to your transmission system.

It is believed that if the following points are observed and followed in furnishing this information, the time and effort required will be reduced to the minimum:

1. Please fill out and return the forms promptly in the inclosed envelope, which requires no postage.

2. Any company generating electricity which is wholly or in part sold for any purpose is considered a public utility.

3. Note that the name of each plant has been entered on the forms and that duplicates are inclosed for your use if you wish to retain copies.

4. If your records show that you submitted a schedule covering the equipment of your plants in December, 1917, and there has been no change in any of your plants since that date, write on the form for reporting equipment "No change since December, 1917." This procedure may be followed with any of the numbered questions on the form.

5. Distributing companies or electric-railway companies which have no generators should mark forms "Current purchased; have no generators."

6. If schedules are not provided for all of your stations, kindly state the number omitted and more forms will be sent you.

Los Angeles Co

See blue print under Kern Co. Well logs.

S. P. Co San Joaquin D.S.

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr J. C. Simpson

Downey Los Angeles Co. Cal.

JUL 25 1895

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? From 7 to 120, the shallow are dug wells the

2. Are there any notably deep wells near you? deeper ones are bored

3. Do any of these flow—that is, are they artesian? Some artesian wells at a depth of 300 ft

4. Have any deep wells been drilled or put down without obtaining water? ~~yes~~ No there is plenty of water but not always a flow

5. Is there any difficulty in obtaining water by wells of moderate depth? No

6. Is the water of good quality; is it hard or soft, alkaline or salty? about Downey the water is very good

7. Is there an ample supply, or can the wells be easily exhausted? there is plenty of water

8. What kind of machinery, if any, is used to raise the water? Dont Know of any being used

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Irigation is practiced but the water is taken from the rivers

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

In the above I have answered only for my home Downey, and what I have said will not apply to the whole of Los Angeles Co. There is an abundance of well water for domestic use and the old and New San Gabriel Rivers supply plenty for irrigation purposes

W. W. Wright A. J. Bramlett W. H. Warren and Oscar Matthews are well borers in this vicinity and can give you a more exhaustive treatise on water than I am capable of

Respectfully J. C. Simmons

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 8 1895, 189

Mr William Thomson
Pasadena So. Aug. Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------ ; range, ------ ; section ------, or distance from town, ------

2. In what year was your well completed? ------ What is size or diameter? ------

3. How was it put down; dug, driven, bored, or drilled? ------

4. What is the total depth in feet? ------ What was depth to water? ------

5. If well is cased, what is size and length of casing? ------

6. Does this well flow—that is, is it artesian? ------

7. If flowing, has the amount increased or decreased? ------

8. If not flowing, does depth of water vary at different times of year? ------

9. How much water can be obtained from the well? ------ Can it be easily lowered? ------

10. What is the quality of water, is it hard, soft, salty, or alkaline? ------

11. If not flowing, how is water raised? ------

12. What was cost of well? ------ Cost of pumping machinery? ------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? ------

---

14. Have you a record of the strata passed through? ------

---

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Pasadena Cal.
Apr 18 · 1895

I have no well- information, I believe to be correct, can be given as to all the wells in this region T 1 N R 12 W S.B.M. and also as to the systems for city- supply & irrigation for Pasadena and vicinity- by

Dr. H. A. Rice
Pasadena Cal-

He has the facts tabulated and informs me that he will forward them if desired. My experience as civil engineer gives me general information as to water over this Southern country & if I can give anything further will do so if desired-

Sincerely

William Thompson
77 Columbia St. Pasadena Cal-

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 10 1895, 189

Mr Jack Braulet
Downey Los Angeles Co, Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. MAY 28 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ------

2. In what year was your well completed?------ What is size or diameter?------

3. How was it put down; dug, driven, bored, or drilled?------

4. What is the total depth in feet?------ What was depth to water?------

5. If well is cased, what is size and length of casing?------

6. Does this well flow—that is, is it artesian?------

7. If flowing, has the amount increased or decreased?------

8. If not flowing, does depth of water vary at different times of year?------

9. How much water can be obtained from the well?------ Can it be easily lowered?------

10. What is the quality of water, is it hard, soft, salty, or alkaline?------

11. If not flowing, how is water raised?------

12. What was cost of well?------ Cost of pumping machinery?------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation?------

14. Have you a record of the strata passed through?------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Downey City May the 18. 1895

Los Angles Cou
Cal.

Mr. F. H. Newell. Dear Sir.

I am A Well Borer. and the Wells in Southern California in Las Angles Cou. and in Araga County and in Sanbernadino County and in River Side County. is mostly artisin Well. the Size of the Pipe is from 2 Inches up to 14 Inch Pipe and the flow is from 4 to 100 miners Inches. the Debth is from 100 feet to 700 feet the formation is Clay Sand and Gravell the Water is Generley good and Soft—

Yours Respectfully

A J Brandett

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 25 1895

, 189

Mr John E Packard

Fowina So Angles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

MAY 28 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL

1. What is the location of your well? Township, ____; range, ____; section ____, or distance from town, 1 1/2 Miles N. of Pomona

2. In what year was your well completed? 1885 What is size or diameter? 7 inch

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 325 What was depth to water? 20 ft.

5. If well is cased, what is size and length of casing? 7 inch

6. Does this well flow—that is, is it artesian? Yes

7. If flowing, has the amount increased or decreased? Neither

8. If not flowing, does depth of water vary at different times of year? No

9. How much water can be obtained from the well? 40 inches Can it be easily lowered? No

10. What is the quality of water, is it hard, soft, salty, or alkaline?

11. If not flowing, how is water raised?

12. What was cost of well? Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? for irrigation

14. Have you a record of the strata passed through? No

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Will be at this
address soon

Geo. D. Whitcomb.

Rooms 1223-1225 Manhattan Building.
307 to 321 Dearborn St.
Chicago.

Harrison Mining Machine.

9–188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 3 1895, 189

Mr Geo D Whitcomb
Glendora Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for ~~the information~~ of the public.

Kindly give a prompt reply.

Very truly, yours,

F. H. NEWELL.

---

1. What is the location of your well? Township, 1 N ; range, 9 W ; section 33, S.W. 1/4 of S.W. 1/4 = S.B.M. ~~or distance from town~~,

2. In what year was your well completed? Dec 1889 What is size or diameter? 5 1/4 in. at bottom

3. How was it put down; dug, driven, bored, or drilled? drilled

4. What is the total depth in feet? 2038 What was depth to water? 76 feet

5. If well is cased, what is size and length of casing? several sizes, commencing with 12 in.

6. Does this well flow—that is, is it artesian? no.

7. If flowing, has the amount increased or decreased?

8. If not flowing, does depth of water vary at different times of year? not so far as known.

9. How much water can be obtained from the well? pumped about 90 gals per min Can it be easily lowered? for work, without reducing its level.

10. What is the quality of water, is it hard, soft, salty, or alkaline? fresh, moderately soft with slight mineral taste.

11. If not flowing, how is water raised? not in use.

12. What was cost of well? over $16000. Cost of pumping machinery? and drilling $3500.

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation?

14. Have you a record of the strata passed through? yes.

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

And reducing from time to time as we had 12 in. casing leaving 6 in. The main casing was 5 1/2 in. We struck gas at about 1250 ft. after which the well flowed without pumping.

1789b5m

This well is drilled on hills having an altitude of about 1000 feet.
Petrifactions and bones have been found showing the hills have been raised from the sea.
The general strata from the surface to 1200 feet may be defined as shales, conglomerates with layers of sand rock containing a considerable percentage of lime, while the lower strata are loaded with a much greater proportion of sand rocks and shale with an occasional stratum of what I have termed birds eye lime rock on account of the rock being filled with little round specks about the size of a birds eye and the rock containing them is composed largely of lime.
At eighty feet we encountered ten feet of petrified molusks or shell fish that was as hard as flint.
The shales were of various colors, white, red, green, brown and black.
We found amount of gas at various depths.
Some shows of oil which continued until the work was stopped.
When we were in calcarious sand rock as shown by the inclosed drillings

Yours Truly

Geo. D. Whitcomb

Glendora Cal
May 7/95

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 23 1895

....., 189...

~~M~~ Long Beach Development Co.,
Long Beach Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. MAY 20 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL

1. What is the location of your well? Township, Long Beach Los angeles Co Cal; ~~range~~, ~~section~~, or ~~distance from town~~, 3 miles

2. In what year was your well completed? 1886 and 94 What is size or diameter? 7 and 9

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 286 and 460 feet What was depth to water? Surface water 20 feet

5. If well is cased, what is size and length of casing? Cased 14 iron 7" and 9" 286 and 460 feet

6. Does this well flow—that is, is it artesian? Yes

7. If flowing, has the amount increased or decreased? Flowing the same as when Bored

8. If not flowing, does depth of water vary at different times of year? 20

9. How much water can be obtained from the well? 5 Miners inches in one 2" in the other Can it be easily lowered? Yes

10. What is the quality of water, is it hard, soft, salty, or alkaline? Soft

11. If not flowing, how is water raised? Flowing

12. What was cost of well? about $2— per foot Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes

14. Have you a record of the strata passed through? 120

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Smith & Dick can give you all other information regarding strata passed through. Their address is Compton Los Angeles Co Cal.

P. B. Hayes

Supt

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 13 1895

....., 189...

Messrs Parker & Haig
San Gabriel Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

MAY 14 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL

1. What is the location of your well? Township, 1 S.; range, 12 W.; section 26, or distance from ~~town~~ L. Angeles. 9 miles

2. In what year was your well completed? 1893. What is size or diameter? 7 inches

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 265. What was depth to water? to artesian flow, 209 ft.

5. If well is cased, what is size and length of casing? Size 7 inch, length 265 ft. in 2 foot joints

6. Does this well flow—that is, is it artesian? Yes.

7. If flowing, has the amount increased or decreased? Not perceptibly

8. If not flowing, does depth of water vary at different times of year? —

9. How much water can be obtained from the well? 9 miners inches Can it be easily lowered?

10. What is the quality of water, is it hard, soft, salty, or alkaline? slightly alkaline & hard

11. If not flowing, how is water raised? —

12. What was cost of well? $487.00 Cost of pumping machinery? $1500.00

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? used for irrigation

14. Have you a record of the strata passed through? 209 ft of Land clay mixed with some sand, & 56 feet of gravel —

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

As stated, the Artesian flow is 9 inches. We pump through a suction pipe let down 25 feet, & increase the flow to abt. 16 inches.

The water is pumped to a Reservoir about a mile distant from the mill, at an elevation of about 80 feet above the mill, & at an estimated friction head of 33 feet.

We use a 10 Horse power "Foos" Gasolene Engine, and a Gould's triplex pump—

We think that Mr. Richard Garvey, San Gabriel, and Messrs Abbott & Moore San Gabriel could give you interesting particulars regarding their respective mills.

Yours truly
Charles A Hains

San Gabriel. 7 May.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 28 1895

....., 189...

Mr J. L. Smith
Fortuna Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

MAY 14 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours,

F. H. NEWELL.

1. What is the location of your well? Township, ... ; range, ... ; section ....., or distance from town, ...

2. In what year was your well completed? ..... What is size or diameter? .....

3. How was it put down; dug, driven, bored, or drilled? .....

4. What is the total depth in feet? ..... What was depth to water? .....

5. If well is cased, what is size and length of casing? .....

6. Does this well flow—that is, is it artesian? .....

7. If flowing, has the amount increased or decreased? .....

8. If not flowing, does depth of water vary at different times of year? .....

9. How much water can be obtained from the well? ..... Can it be easily lowered? .....

10. What is the quality of water, is it hard, soft, salty, or alkaline? .....

11. If not flowing, how is water raised? .....

12. What was cost of well? ..... Cost of pumping machinery? .....

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? .....

.....

14. Have you a record of the strata passed through? .....

.....

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Pomona Land & Water Co. Pomona.

Lewis Wright (on pumping artesian wells) "

Sycamore Water development Co. "

John. E Packard "

Becket & Fleming "

Richard Gird Chino

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 23 1895, 189

Mr. W. W. Wright
Downey P.O. Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. MAY 14 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ½ mile

2. In what year was your well completed? 1889 What is size or diameter? 4 inch

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 94 feet What was depth to water? 87 feet

5. If well is cased, what is size and length of casing? All cased 94 feet

6. Does this well flow—that is, is it artesian? no

7. If flowing, has the amount increased or decreased? ---

8. If not flowing, does depth of water vary at different times of year? no

9. How much water can be obtained from the well? unmeasurable Can it be easily lowered? no

10. What is the quality of water, is it hard, soft, salty, or alkaline? hard of Irrn

11. If not flowing, how is water raised? by a windmill

12. What was cost of well? Sixty Three dollars Cost of pumping machinery? Ninty Five Dollars

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? no

14. Have you a record of the strata passed through? no

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 189 5

Mr Richard Garvey
San Gabriel Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 12 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? Two hundred feet—

2. Are there any notably deep wells near you? None that are flowing

3. Do any of these flow—that is, are they artesian? all They are Artisian

4. Have any deep wells been drilled or put down without obtaining water? Yes, I have put down one to a depth of 500 ft & no Water

5. Is there any difficulty in obtaining water by wells of moderate depth? None where the Ground is Artesian

6. Is the water of good quality; is it hard or soft, alkaline or salty? In places it is good, sweet & soft-, In places Alkaline & hard & in other places is strongly impregnated with Sulphur

7. Is there an ample supply, or can the wells be easily exhausted? Apparently the Suply is ample—

8. What kind of machinery, if any, is used to raise the water? Gasoline & all other Kinds of Engines is used where Water is raised for Irrigation

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes, Generally for Irrigation

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

I am located in San Gabriel Valley. I own about 2000 acres of land, on 600 acres of which I can obtain Artesian flowing wells at a depth of 200 ft. anywhere, I have two such wells now flowing. Six miles above in the same valley and nearer the "Sierra Madre" Mountains another Artesian belt exists where for a distance of along under the mountains 10 or 12 miles Artesian wells exist and good flowing water is found at a depth of 200 ft. Beyond, South towards the ocean Artesian wells are also found but at a greater depth, but the water in places unfit for use on acc of its being strongly alkalin & more strong still impregnated with sulpher.

I am Resp Yours Obt
Servant
Richard Garvey

I beg to refer you to

W. A Wrench, Arcadia Cal
A. B. Chapman, San Gabriel Cal
L. J. Rose " San Gabriel "
J. De Barth Shorb " " "
Geo. S. Patton " " "
Messrs Pcoples & Haig " " "
Sylvin D. Howe Alhambra Cal

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr Wm O Noble
San Gabriel Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 13 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? One Hundred Feet

2. Are there any notably deep wells near you? No

3. Do any of these flow—that is, are they artesian? There is an artesian belt about 3 miles North of here

4. Have any deep wells been drilled or put down without obtaining water? No

5. Is there any difficulty in obtaining water by wells of moderate depth? Surface water is to be found anywhere here at about 10 ft.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Very best soft water

7. Is there an ample supply, or can the wells be easily exhausted? A number of wells around here use engines & 12 hours pumping shows no shrinkage

8. What kind of machinery, if any, is used to raise the water? Windmills & gasoline engines

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? For both

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL. APR 10 1895

WASHINGTON, D. C., APR 10 1895, 189

Mr A B Chapman
San Gabriel So Angeles Co Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. APR 30 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours,

F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, Several in Santa Anita Ranch

2. In what year was your well completed? One 1892 What is size or diameter? 7 inches

3. How was it put down; dug, driven, bored, or drilled? bored

4. What is the total depth in feet? 175 ft What was depth to water? Surface

5. If well is cased, what is size and length of casing? Cased all the way 7 in Iron

6. Does this well flow—that is, is it artesian? Yes

7. If flowing, has the amount increased or decreased? Remains Steady

8. If not flowing, does depth of water vary at different times of year? do

9. How much water can be obtained from the well? about 20 Miners inches Can it be easily lowered? Yes

10. What is the quality of water, is it hard, soft, salty, or alkaline? Soft, good domestic water

11. If not flowing, how is water raised? Flowing

12. What was cost of well? about 425 Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes

14. Have you a record of the strata passed through? no

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value. A B Chapman

1789b5m

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 6 1895, 189

Mr A B Chapman
San Gabriel Los Angeles Co Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. APR 30 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ------

2. In what year was your well completed? ------ What is size or diameter? ------

3. How was it put down; dug, driven, bored, or drilled? ------

4. What is the total depth in feet? ------ What was depth to water? ------

5. If well is cased, what is size and length of casing? ------

6. Does this well flow—that is, is it artesian? ------

7. If flowing, has the amount increased or decreased? ------

8. If not flowing, does depth of water vary at different times of year? ------

9. How much water can be obtained from the well? ------ Can it be easily lowered? ------

10. What is the quality of water, is it hard, soft, salty, or alkaline? ------

11. If not flowing, how is water raised? ------

12. What was cost of well? ------ Cost of pumping machinery? ------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? ------

14. Have you a record of the strata passed through? ------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27 1895

Ms Maurice Sullivan
Long Beach Los Angeles Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

APR 17 1895

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live?

Alamitos Land Co 10 Wells Aver depth 330ft

2. Are there any notably deep wells near you? No

Bixby at Bixby Station 5 Wells average 400ft

3. Do any of these flow—that is, are they artesian? All are Artesean flowing Wells

4. Have any deep wells been drilled or put down without obtaining water? No

No Such thing as failure except a pipe get bent

5. Is there any difficulty in obtaining water by wells of moderate depth? No

6. Is the water of good quality; is it hard or soft, alkaline or salty? the Water is extra good and Soft

7. Is there an ample supply, or can the wells be easily exhausted? Its the general Opinion that the Snow from the Sierra Madre Mountains Supplies

8. What kind of machinery, if any, is used to raise the water? Alamitos Land Co 1 Centrifugal pump 600 gals per Minute 1 double acting Worthington Cap 800 gals per Minute

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Used for both

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Gen[l] Bautons well one of the best in the State
230 ft
Long Beach Development Co 3 wells,
Deepest, 270 ft
all flowing good Artesian Water
Atamitos Land Co / Centrifugal Pump (inside

Maurice Sullivan
Long Beach, Los Angeles Co, Cal[a]
April 6[th] 1895

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 25 1895

....., 189...

M. Geo. Burtons
Long Beach So Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

MAY 20 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

1. What is the location of your well? Township, 4S; range, 12W; section 8, or distance from town, ...

2. In what year was your well completed? 1894 What is size or diameter? 10 inch 135 feet 8 inch 61 feet more

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 996 feet What was depth to water? Surface water 18 feet first flow of artesian water 335

5. If well is cased, what is size and length of casing? Cased all the way with double riveted 2 feet Iron pipe No 12 Iron

6. Does this well flow—that is, is it artesian? Yes

7. If flowing, has the amount increased or decreased? No perceptible variation

8. If not flowing, does depth of water vary at different times of year? .....

9. How much water can be obtained from the well? 166 Miners Inches Can it be easily lowered? No

10. What is the quality of water, is it hard, soft, salty, or alkaline? Soft very pure 9/10 grains of all 20 Lbs pr Gall

11. If not flowing, how is water raised? .....

12. What was cost of well? $996.00 Cost of pumping machinery? .....

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Both Domestic and Irrigation

14. Have you a record of the strata passed through? Clay, with strata of Sand & Gravel 335 feet, then Water with coarse Sand & Gravel for 61 feet

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Los Angeles May 11th 1895

Friend Newell.

I discribe the new well bored since you were here. as it is larger and deeper than the old one that you saw whe you were here. the old one is 339 feet deep with 7 inch pipe. the new well is 400 feet north of Old well. on my south line 500 feet south of old well the supers Bixby have bored an 8 inch well ~~that struck~~ flowing water at 335 and was continued to 592 before striking the bottom of the stream except about 3 feet of clay. all the way from 335 down was sand gravel & water with a strong pressure all the time At least three underground streams from northerly directions seem to have formed a junction on my land and just south of my line the stream encounters a bank of hard pan clay fully ~~20 feet~~ thick which divides and scatters it. on my land the stream or strata of water is fully 500 feet wide & 1200 feet long and 60 feet deep. this has all been determined by some 12 different borings. the well borers ~~Experts~~ and engineers estimate that we can develop 50,000 miners inches of water from this ground. or more than all the surface streams in Sou Cal

I wish you would be so kind as to send me a copy of your report when completed

I see Mr Von Dyke occasionally. but do not know what he is doing at present

Yours Truly

E Boulou

121 South Broadway

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 28 1895

Compton, 189

Mr. J. M. Shepard

Compton Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. MAY 21 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

1. What is the location of your well? Township, Compton; range, 9 W.; section 5, or distance from town, 1½ South Los Angeles

2. In what year was your well completed? 1894 What is size or diameter? Seven inches

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 297 What was depth to water? 246

5. If well is cased, what is size and length of casing? Pipe 2 ft Gang No. 16 iron and double

6. Does this well flow—that is, is it artesian? Yes + flows 4½ in. over top pipe

7. If flowing, has the amount increased or decreased? has increased

8. If not flowing, does depth of water vary at different times of year? not much

9. How much water can be obtained from the well? About 20 miners inches Can it be easily lowered? No.

10. What is the quality of water, is it hard, soft, salty, or alkaline? Hard

11. If not flowing, how is water raised?

12. What was cost of well? $80.00 Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Irrigation

14. Have you a record of the strata passed through? Yes,

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Last year being a dry one many wells were bored in this section varying in depth from 130 to 660 ft. in flow from 1½ in. to 16 in. over top of pipe or casing

I had a 2 in Artesian well bored, using for domestic use 2 in. gas pipe for casing got a good flow & have pipes connected with the casing & convey water to house & barn even to the second story.

Depth of well 308 ft.
Cost of " $170.00

Mr W W Wright of Downey Calif. could give much more information in such matters than I can

Respectfully

J. M. Shepard

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr C. A. Conkling Compton So Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 17 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? 200 feet. Some dozen or more wells 560 to 600 feet.

2. Are there any notably deep wells near you? was put down last Summer. one flows 16 inches over a 7 in pip one 5½ in

3. Do any of these flow—that is, are they artesian? over 10 in pipe nearly all the wells in this valley flow on an average 2 in

4. Have any deep wells been drilled or put down without obtaining water? No. Some west of Compton does not flow. but it is Artesian Water.

5. Is there any difficulty in obtaining water by wells of moderate depth? None

6. Is the water of good quality; is it hard or soft, alkaline or salty? Soft & Hard, Excellent.

7. Is there an ample supply, or can the wells be easily exhausted? it Seemes impossible to Exhanst them with Steam Engine.

8. What kind of machinery, if any, is used to raise the water? West of Here boath Steam Gasoline & Windmills.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? for Irrigatin

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

all along the Coast theire is Artecian belts. that is Some localities wells flow and then between the water will not come quite to the top of ground but furnish plenty for a pump well.

As to My own imediate vacinity we are in the Artecian belt and it is seldom a well is put down that does not flow. I put one down last november on the edge of the Mesa (just out of the valey) 197 feet the flow was 7 in our a 7 in pipe and when piped up raised 9 feet abov ground. Can Irrigate 5 Acres of Alfalfa in 24 Hours.

Respectfully Yours C. A. Lankhin

J M Shepard
Compton
Cal

Can give you much information as he lives in Center of valey and has had several Wells put down

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 189 5

Mr A W Bragg
Compton Los Angles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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APR 17 1895

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? the first Strata from 85 to 140 ft the next from 300 to 350 ft a few 400 & 500

2. Are there any notably deep wells near you? Non deeper than 100 a very few over that

3. Do any of these flow—that is, are they artesian? all the first Strata from 1 to 2½ ins over a ¾ in the pipe

4. Have any deep wells been drilled or put down without obtaining water? a few from 600 to 1000 ft no to small flow

5. Is there any difficulty in obtaining water by wells of moderate depth? None

6. Is the water of good quality; is it hard or soft, alkaline or salty? yes generally medium No salt No alkaline below from 15 to 25 ft

7. Is there an ample supply, or can the wells be easily exhausted? yes in the first Strata only.

8. What kind of machinery, if any, is used to raise the water? None

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? no; yes

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

I have a well completed july 1894. 350 ft deep that flows 8 inches above a 7 inch Pipe. another owned by Mr Fisher about a mile and one Half East of this 290 that flows 16 inches all others in this vecinity flows from 2½ to 4 inches there is a grate number of well in this vecinity will avrage one to Every 40 acres.

A M. Bragg

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 10 1895, 189

Mr W A Unruh
Arcadia Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

1. What is the location of your well? Township, 1 N; range, 11 W; section 29 & 30 or distance from town,

2. In what year was your well completed? 1879 1882 1884 1886 1890 What is size or diameter? 8 inch

3. How was it put down; dug, driven, bored, or drilled? Bored and drilled

4. What is the total depth in feet? 160 180 214 230 300 What was depth to water? 160 & 180 feet to flowing water

5. If well is cased, what is size and length of casing? 8 inch casing

6. Does this well flow—that is, is it artesian? 14 Artesian in all 14 wells

7. If flowing, has the amount increased or decreased? all remain about the same

8. If not flowing, does depth of water vary at different times of year?

9. How much water can be obtained from the well? from 6 to 17 miners inch flow Can it be easily lowered?

10. What is the quality of water, is it hard, soft, salty, or alkaline? Soft

11. If not flowing, how is water raised? —

12. What was cost of well? $250 to $600 Cost of pumping machinery?

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Irrigation

14. Have you a record of the strata passed through? No. a blue clay formation of varying depths over lies water strata — in some cases cobble Strata found

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value. The above wells belong to E. J. Baldwin - The artesian water bearing land is well defined and consists of about 1,000 acres - in some places Springs come to Surface -

W A Unruh

1789b5m

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 8 1895, 189

Mr Nelson & Burch
Secty Water Co Inglewood So Angeles Co Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. MAY 8 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ------

2. In what year was your well completed? ------ What is size or diameter? ------

3. How was it put down; dug, driven, bored, or drilled? ------

4. What is the total depth in feet? ------ What was depth to water? ------

5. If well is cased, what is size and length of casing? ------

6. Does this well flow—that is, is it artesian? ------

7. If flowing, has the amount increased or decreased? ------

8. If not flowing, does depth of water vary at different times of year? ------

9. How much water can be obtained from the well? ------ Can it be easily lowered? ------

10. What is the quality of water, is it hard, soft, salty, or alkaline? ------

11. If not flowing, how is water raised? ------

12. What was cost of well? ------ Cost of pumping machinery? ------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? ------

14. Have you a record of the strata passed through? ------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

No artesian Well near here.
Nelson & Burch

1789b5m

Address for information on this subject

Hon. E. M. Ross,
U. S. Judge's Chambers
Los Angeles,
Calif.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 13 1895

....., 189...

Mr A D. How

Alhambra So Angeles Co., Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. APR 30 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ------

2. In what year was your well completed?------ What is size or diameter?------

3. How was it put down; dug, driven, bored, or drilled?------

4. What is the total depth in feet?------ What was depth to water?------

5. If well is cased, what is size and length of casing?------

6. Does this well flow—that is, is it artesian?------

7. If flowing, has the amount increased or decreased?------

8. If not flowing, does depth of water vary at different times of year?------

9. How much water can be obtained from the well?------ Can it be easily lowered?------

10. What is the quality of water, is it hard, soft, salty, or alkaline?------

11. If not flowing, how is water raised?------

12. What was cost of well?------ Cost of pumping machinery?------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation?------

14. Have you a record of the strata passed through?------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Alhambra Los Angeles Co Calª Apl 22nd 95

am using Artesian Water taken from a Well Some
five miles North of my place. No Wells except the following
within a distance of Several miles

Richard Garvey (San Gabriel Post Office) has a fine
Well ½ mile East of my place - he also Tunneled into a
low Range of Hills ½ mile South of my ranch and obtained
as I am informed upwards of one Miners Inch of Water
He also has an Artesian Well 1½ miles East of my place

Messrs Parker & Vague (Alhambra Post Office) also have
an artesian Well near the above Garvey Well

M. McCallum (San Gabriel Post Office)
has a good Well - as I am informed

Respy
Squire D How

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 13 1895

....., 189...

Mr Henry C. Roberts
Azusa Los Angeles Co. Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. APR 30 1895

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Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, ------

2. In what year was your well completed?------ What is size or diameter?------

3. How was it put down; dug, driven, bored, or drilled?------

4. What is the total depth in feet?------ What was depth to water?------

5. If well is cased, what is size and length of casing?------

6. Does this well flow—that is, is it artesian?------

7. If flowing, has the amount increased or decreased?------

8. If not flowing, does depth of water vary at different times of year?------

9. How much water can be obtained from the well?------ Can it be easily lowered?------

10. What is the quality of water, is it hard, soft, salty, or alkaline?------

11. If not flowing, how is water raised?------

12. What was cost of well?------ Cost of pumping machinery?------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation?------

14. Have you a record of the strata passed through?------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Dear Sir

In reply to the within. I would inform you. there is no flowing wells on the East side of the San Gabriel River untill you reach Lordsburgh - some twelve miles East of Azusa. We irregate a large area of land from the San Gabriel River. also our domestic water. A Letter to Supervisor Woodward (Longsburgh) would give all needed information regarding the flowing wells (which are numerous) in that section

Azusa Cal April 22nd 1895

Your Truly

Henry le Roberts

9–188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 9 1895

....., 189...

Mr Sherman Riggins
Whittier Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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Kindly give a prompt reply.

Very truly, yours, F. H. Newell

F. H. NEWELL

1. What is the location of your well? Township for Rule; range, ...; section ....., or distance from town, 1 mile

2. In what year was your well completed? 1891 What is size or diameter? six inch

3. How was it put down; dug, driven, bored, or drilled? Drilled

4. What is the total depth in feet? 210 ft. What was depth to water? Within 40 feet of surface

5. If well is cased, what is size and length of casing? 150 feet five inch

6. Does this well flow—that is, is it artesian? no.

7. If flowing, has the amount increased or decreased? ——

8. If not flowing, does depth of water vary at different times of year? very little

9. How much water can be obtained from the well? 60.000 gallons per 24 hr Can it be easily lowered? yes

10. What is the quality of water, is it hard, soft, salty, or alkaline? Hard some alkaline

11. If not flowing, how is water raised? Deep well pump

12. What was cost of well? about $400 Cost of pumping machinery? about $600.

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? It was used for domestic supply and watering horses, Not used now

14. Have you a record of the strata passed through? no

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Once made a test of the well
put two pumps at work and
run sixty days and nights
with out stopping averaged 60.000 gallons
per 24 hours and when shut down water
had raised nearly four feet higher than
when pumps were first started.

A part of this water went to two boilers
these boilers showed heavy scale deposits
and water proved to be very hard with
signs of alkali.

Refer to Hon. Hervey Lindley and
Dr. Walter Lindley. Los Angeles
California.

No Department of Interior envelope enclosed

Very truly.

Sherman Wiggins
Engineer.

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr. J. H. Martin
Dear Water So Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

MAY 7 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? Surface wells from 9 to 25 ft. artisian from 100 to 500 ft. in the Low Lands

2. Are there any notably deep wells near you? on the Mesa or bench near the surface well water can not be obtained less than 85 to 150 ft.

3. Do any of these flow—that is, are they artesian? at the debth of 460 ft. one well is flowin 40 inches 60 percent of the artisian wells weaken after a few years owin to Cones or others above tapping same vein

4. Have any deep wells been drilled or put down without obtaining water? a great many have failed only Certain Localities when artisian water can be obtained in the most favorable Localities parties have failed to get water at all

5. Is there any difficulty in obtaining water by wells of moderate depth? the veins of water run from the Sierra Madres to the East some shallow some Deep water Cannot obtained even at the debth of 1000 feet

6. Is the water of good quality; is it hard or soft, alkaline or salty? we have from the purest soft water to Sulphur alkali and Salt in the same locality in a distance of 1/4 mile the different kinds of water

7. Is there an ample supply, or can the wells be easily exhausted? Cannot rely on artisian wells for Irrigation

8. What kind of machinery, if any, is used to raise the water? different ways by which water is raised mostly wind mills

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Mostly for domestic purposes

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value. the most practical water supplies is usid from reservoirs ide from the Streams or Rivers

there is not one Artesian well
in 500 that you can rely for
Irrigation to any extent
but all simply for domestic
purposes only.

J. W. Martin

Los Nietos Cal

Los Angeles Co

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Miss Rosa E Allen
Co
Downey So Angeles Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

MAY 7 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? Several different strates ten to five hundred feet.

2. Are there any notably deep wells near you? Some five and six hundred feet;

3. Do any of these flow—that is, are they artesian? Yes: one well near Downey over 600 ft. deep flows 7 in. over ten inch pipe.

4. Have any deep wells been drilled or put down without obtaining water? Only through accident - to pipe.

5. Is there any difficulty in obtaining water by wells of moderate depth? None.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Of good quality— Some are impregnated with mineral Mc.

7. Is there an ample supply, or can the wells be easily exhausted? Supply is exhaustless.

8. What kind of machinery, if any, is used to raise the water? Wind Mills, ordinarily.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? The artesian water used for irrigation.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Names of Well Bearers – Past –
Office at – Downey

Wm. Morrow –

W. W Wright –

Jack Brandlet –

Ascen Mathew –

Respectfully –

Mrs Rosa E. Allen.

Downey,
Los Angeles County
California

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 3 1895

WASHINGTON, D. C. ..... , 189...

Mr George Hazzard
Whittier Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

MAY 7 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours,

F. H. NEWELL.

---

1. What is the location of your well? Township, ... ; range, ... ; section ....., or distance from town, ...

2. In what year was your well completed? 8. '89 What is size or diameter? 7 in

3. How was it put down; dug, driven, bored, or drilled? bored

4. What is the total depth in feet? 165 What was depth to water? 72 ft

5. If well is cased, what is size and length of casing? 7 in Casing

6. Does this well flow—that is, is it artesian? .....

7. If flowing, has the amount increased or decreased? .....

8. If not flowing, does depth of water vary at different times of year? Does not vary.

9. How much water can be obtained from the well? Do not know Can it be easily lowered? no

10. What is the quality of water, is it hard, soft, salty, or alkaline? .....

11. If not flowing, how is water raised? Wind mill

12. What was cost of well? 225 Cost of pumping machinery? 300.00

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? not other than on garden

14. Have you a record of the strata passed through? no. All clay except for a small stratum of dry gravel at about 60 ft. The water comes from a 4 ft. gravel stratum which lies

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

and

We are situated on the South slope of a range of hills, about 1500 ft high, which seems to cut off artesian water. The strata seem to dip with the slope. Further up on the slope about 1/4 of a mile is a well over 2400 ft deep, which seems to be inexhaustible as it has been severely tried. Mr. A. L. Reed of Whittier can give you more complete information.

Geo L. Haggard

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 26 1895, 189

Mr Frank L Palmer
Pomona San Angeles Co Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. MAY 10 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town ------

2. In what year was your well completed? ------ What is size or diameter? ------

3. How was it put down; dug, driven, bored, or drilled? ------

4. What is the total depth in feet? ------ What was depth to water? ------

5. If well is cased, what is size and length of casing? ------

6. Does this well flow—that is, is it artesian? ------

7. If flowing, has the amount increased or decreased? ------

8. If not flowing, does depth of water vary at different times of year? ------

9. How much water can be obtained from the well? ------ Can it be easily lowered? ------

10. What is the quality of water, is it hard, soft, salty, or alkaline? ------

11. If not flowing, how is water raised? ------

12. What was cost of well? ------ Cost of pumping machinery? ------

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? ------

14. Have you a record of the strata passed through? ------

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Have no well (over)

1789b5m

Up to four years ago I was Secy. of Pomona Land & Water Company of Pomona which probably accounts for this blank being sent to me.

Address following parties:-

- Pomona Land & Water Co.
- ~~Citizens Water Co.~~
- ~~Fred. J. Smith~~
- ~~Robert Catchcart~~
- ~~C. C. Johnson~~
- ~~Peter Fleming~~
- Richard Gird
- J. B. Camp
- A. T. Currier

Pomona Cal.

- Lewis Wright

Respy ~~F. L. Palmer~~

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr Jeremiah Clay
Rivera Los Angeles Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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APR 17 1895

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? 80 feet.

2. Are there any notably deep wells near you? None very near.

3. Do any of these flow—that is, are they artesian? Four miles northward southeast, is an artesian belt.

4. Have any deep wells been drilled or put down without obtaining water? None. In a few instances wells from 400 to 700 ft, plenty of water, but no flow.

5. Is there any difficulty in obtaining water by wells of moderate depth? None.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Somewhat alkalisses

7. Is there an ample supply, or can the wells be easily exhausted? They cannot be exhausted.

8. What kind of machinery, if any, is used to raise the water? Principally wind mills

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Some artesian wells are used for irrigation: otherwise a small scale.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Probably W. W. Wright, a well borer, Downey, can give more information than I

The Los Nietos Valley irrigates principally from San Gabriel Rivers.

Respectfully

J. Clay

Downey

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 26, 1895

Mr P. J. Dreher

Pomona Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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MAY 7 1895

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? 150

2. Are there any notably deep wells near you? one about 950 ft or down to Sea Level

3. Do any of these flow—that is, are they artesian? all

4. Have any deep wells been drilled or put down without obtaining water? Yes

5. Is there any difficulty in obtaining water by wells of moderate depth? Surface Water? No.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Good soft

7. Is there an ample supply, or can the wells be easily exhausted? Ample supply

8. What kind of machinery, if any, is used to raise the water? Gas Engines, Wind Mills & Centrifical Pumps

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

The Pomona Land & Water Co.,

Sycamore Water Development Co.,

and Beckett Fleming & Brady,

are large developers of Artesian Water

by wells and Tunnels all of

Pomona P. O. Cal.

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 26, 1895

Mr Robt a allen,
Pomona So Angeles Co, Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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APR 17 1895

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? Where surface water is obtainable, from ten to forty feet, Artesian, from 150 to 300 + about

2. Are there any notably deep wells near you? I have heard of four hundred foot and a little more, where water was not obtained.

3. Do any of these flow—that is, are they artesian? many

4. Have any deep wells been drilled or put down without obtaining water? some

5. Is there any difficulty in obtaining water by wells of moderate depth? no water in some localities, in others plenty at little depth.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Artesian, mostly used in Pomona for domestic purposes, is perfectly good; a little lime, which it contains, makes it hard.

7. Is there an ample supply, or can the wells be easily exhausted? The supply is apparently permanent, but not inexhaustible - i.e., increasing the number of artesian wells too greatly reduces flow.

8. What kind of machinery, if any, is used to raise the water? Windmills for surface wells and, (rarely) gasoline engines to increase outflow of artesian wells.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? For irrigation as well as for domestic purposes.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Surface water is obtainable in all the lower portion of our valley. Our higher lands are dry - outside of artesian belt.

Artesian wells are bored in what is known as the artesian belt - a pretty well defined territory lying between Pomona and the mountains, outside of which belt we do not find artesian water - nor have artesian wells from about 150 feet in depth to about 300. most wells lately bored being at least 250 feet.

My own knowledge of the subject is derived more from hearsay and general observation than from experimental work in this direction - I would give you the following names of residents who have special intent in artesian wells and water development.

Mr. Frank L. Palmer
Mr. Fred J Smith
Mr John E Packard
x Mr Peter Fleming

Pomona, Cal.

Very Respectfully yours
Robt. A. Allen

x Mr. Fleming has developed water by tunneling as well as boring.

a

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 26, 1895

Mr H. H. Williams,
Pomona So Angeles Co. Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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APR 17 1895

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? I have only one well ~~drawn~~ Artesian dug Jan 1886 flowed 85 in until other wells sunk near it drawn it down to about 10 in Depth 221 ft level

2. Are there any notably deep wells near you? there is

3. Do any of these flow—that is, are they artesian? yes

4. Have any deep wells been drilled or put down without obtaining water?

5. Is there any difficulty in obtaining water by wells of moderate depth?

6. Is the water of good quality; is it hard or soft, alkaline or salty? the very best

7. Is there an ample supply, or can the wells be easily exhausted?

8. What kind of machinery, if any, is used to raise the water? the Supply Seems Inexhaustable It is Supposed to be an underground Stream with its Source in the hills north of us about 6 miles

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? yes also Supplies The City of Pomona

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

B S. Nichols Pres= of the Pomona Land & water Co- has a Record of the majority of the wells in this Valley_ and can give you correct Information if he will also F. J. Smith of the Citizens water co Pomona - has a Record of some good wells

without a map it is very hard to describe the water System here - as there has been wells dug 200 ft and no water at all - within 800 ft of good flowing wells

Yours Respt H H Williams

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr H H Stevenson
Riva So. Angelus Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 17 1895

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Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live?

Surface Wells 10 ft! Artesian Wells 150 ft.

2. Are there any notably deep wells near you? Yes the deepest an artesian. 800 ft and no water was obtained at this depth; no artesian water!

3. Do any of these flow—that is, are they artesian?

Yes, I know of no failure to obtain artesian. Except as above,

4. Have any deep wells been drilled or put down without obtaining water?

None that I am aware of except the one as above,

5. Is there any difficulty in obtaining water by wells of moderate depth?

None whatever.

6. Is the water of good quality; is it hard or soft, alkaline or salty?

Surface water, Hard and Alkaline Artesian always soft,

7. Is there an ample supply, or can the wells be easily exhausted?

In many instances Supply ample. owing to depth

8. What kind of machinery, if any, is used to raise the water?

In Surface Wells. Wind Mills generally used

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes it is

Very frequently used for Irrigation both from Surface & Artesian Wells,

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

(over)

Dr Sir. Long Beach Cal apr 2nd/90

I take pleasure in giving you any information I can upon the foregoing subject, In California "Water is King" for we all depend upon irrigation in our Orchards Corn & Alfalfa fields. and land with no water right. is of no practical value,

In Many localities the Surface or first strata of Water is only 8 to 10 ft from Surface. but nearly always More or less alkaline, unfit for domestic purposes. yet where such exists the land is Considered the best if not too much alkali in the Soil, in Such land you always have to bore from 90 to 120 ft to get water fit for domestic purposes.

In other localities - and Some times only a few miles away - you will bore 150 to 300 ft for good water, and there is no Surface Stream, Water in such localities always good.

In other places and often only a few miles away from Either of above localities Artesian May be obtained at from 125 to 300 ft and in Several instances a flow of 30 Miners inches obtained. Many wells affording a very good irrigating Stream,

In only one instance do I Know of failure to obtain Artesian Water. which Well was Sunk 700 or 800 ft. and Then abandoned, Artesian Wells. and the Natural Streams are always utilized for irrigation purposes to a greater or less extent, and the time will soon Come in California when No water will be permitted to go to Waste

I am Yrs Very Truly &c

H. H. Stevenson

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr J. D. Reymer, Alhambra So. Angeles Cal

APR 19 1895

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

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Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? This is hard to answer near Compton Village within 3 miles – there are artesian wells one is 544 feet – another 160 ft – 535 ft 365 ft – 390 ft – again at 700 got no water.

2. Are there any notably deep wells near you? None

3. Do any of these flow—that is, are they artesian? They are all artesians – the first at 544 ft flows constantly through a 9½ inch pipe (can irrigate to 160 acres with it –

4. Have any deep wells been drilled or put down without obtaining water? Yes, here and there as for instances, but perhaps they did not go far enough

5. Is there any difficulty in obtaining water by wells of moderate depth? No – they get water in ordinary wells for pumps at 25 to 40 feet in depth

6. Is the water of good quality; is it hard or soft, alkaline or salty? It is good but may be a little brackish in some cases.

7. Is there an ample supply, or can the wells be easily exhausted? The supply is ample and I have not heard of any being exhausted

8. What kind of machinery, if any, is used to raise the water? None, it flows freely

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? It is used for all purposes domestic, irrigation and for driving machinery

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

over

The Stretch of land I allude to is between the Sierra Madre Range of Mountains and the Coast Range - where there is no underground outlet into any of the Streams that flow to the Pacific - At the foot of the Sierras the water is gathered in Reservoirs and piped to the various Ranches and Homes for domestic and irrigating purposes - There is a great number of Artesian wells flowing in the Country. I am only partially acquainted with the localities by Messrs Smith and Buck are well-boxers and engaged in the business. The live at Pasadena in Los Angeles County and have also a placer at Compton Los Angeles Co. and by addressing them I think you can get a comprehensive account of the number & character of Artesian wells in this County. I shall be glad to aid you in any inquiries as far as I can

Yours respectfully

James D. Rayment

CALIFORNIA ELIXIR MINERAL

SPRING WATER

THE CALIFORNIA ELIXIR

MINERAL SPRING WATER

COMPANY.

INCORPORATED

PRINCIPAL OFFICE:

121 TEMPLE STREET

LOS ANGELES, CALIFORNIA.

The California Elixir Mineral Spring Water Co.

PRINCIPAL OFFICE, 121 TEMPLE STREET,
LOS ANGELES, CAL.

INCORPORATORS AND DIRECTORS:

J. W. TRUEWORTHY, M. D. — E. C. BUELL, M. D. — C. H. McLAUGHLIN, M. D.
A. G. DELISLE — J. C. BROWN — JAS. D. REYMERT

ANALYSIS OF THE CALIFORNIA ELIXIR MINERAL SPRING WATER

.... BY THE .....

** **State Analytical Assay Office** **

FIXED INGREDIENTS

	Grs. per Gal.
Sodium Sulphate	29.302
Calcium Carbonate	7.210
Magnesium Carbonate	23.646
Silica	1.470
Iron, Oxides and Alumina	.140
Sodium Chloride	4.620
Calcium Sulphate	3.199

The Carbonates of Calcium and Magnesium are contained in the water in the form of Soluble Bicarbonates. The Iron, Oxides and Aluminums are in the form of finely suspended matter. The Sodium Sulphate and Bicarbonate of Magnesia act as Cathartics and Aperients.

** **WARRANTED GENUINE, NOT MANUFACTURED.** **

It is the Best Mineral Water in California and is not excelled by any Mineral Water on the Globe.

THIS water is obtained from a natural spring in Riverside County, California. Its curative effects have been known to a large number of people for years past, and many have traveled long distances to camp at the Springs and restore impaired health by its use.

The Remarkable Cures resulting from the use of this mineral water, and comparison of the analysis with that of waters from the most famous springs of the world, led to the inevitable conclusion that nature had placed at our door a health-giving, veritable elixir.

As a Table Water it is second to no water on the market, being pleasant, pure and invigorating.

This country is flooded with spurious filtrations and chemical mixtures, cheap imitations of natural mineral water.

We Sell only **Natures own Product**, unadulterated, pure from the Flowing Spring. Natures own remedy for human ailments, and an invigorating drink for the healthy.

Please look at the analysis; you find **Sulphates,** which the body requires for the albuminous substances, **Calcium** and **Magnesium** for the teeth and bones, **Iron** and **Sodium** for the blood, **Sodium Chloride** for the liver and bile, **Aluminum** and **Oxide, Sodium, Sulphates** and **Bicarbonates of Magnesia** for the renovation and general vigor of the body and for healthy circulation and digestion—operating also as cathartics and aperients.

It stimulates, invigorates and strengthens the system, possesses remarkable curative properties. Indorsed by most eminent physicians and used by many prominent families throughout Southern California. It is pleasant to drink and is sold at a very moderate price wholesale and retail.

The Ladies use it as a Wash for their Complexion.

Highest Diploma at Los Angeles Agricultural County Fair 1894 . . . .

Among the Numerous Testimonials we Quote only the Following:

Los Angeles, Cal., May 15, 1894.

To The California Elixir Mineral Spring Water Co.

Gentlemen—After carefully examining the California Elixir Mineral Spring Water and from the analysis of Prof. Falkenau, we take pleasure in stating that we believe it is one of the best waters for the relief and permanent cure of

First. All Blood Diseases.

Second. Kidney Complaints and Bladder troubles, Bright's Disease, Diabetes, Pain on Urinating.

Third. Female Complaints.

Fourth. Consumption, Chest and Lung Diseases.

Fifth. Constipation, Dyspepsia, Rhematism, Gout, all derangements of the Liver, Billious Attacks.

Sixth. Spinal Irritation.

Seventh. Obesity and Organic Diseases resulting from excess of fat.

Eighth. Also for effects of excessive use of Liquors, Tobacco and Opium. We especially recommend it as a table water on account of its pleasant taste and exhilarating properties.

J. W. Trueworthy, M. D.
C. H. McLaughlin, M. D.

(TESTIMONIALS Continued)

Los Angeles, Cal., July 5, 1894.

To California Elixir Mineral Spring Water Co.

Gentlemen:— I can heartily endorse your Mineral Water, both for table and medicinal purposes.

Many of my patrons are using it as a table water for its corrective effects in skin affections and for constipation.

I have used the Carbonated water with most gratifying results during the entire course of Typhoid fevers. It is very grateful to the patient. I use the Elixir Mineral Water in my own family, exclusive of all others.

Yours truly,
E. C. Buell, M. D.

Decater, Tex., May 15, 1894.

I desire to make known to the public, the virtues of the California Elixir Mineral Water. Have found it highly beneficial for a disordered condition of the stomach. It is pleasant to drink and produces no disagreeable effects whatever. Both my wife and self have experienced great benefit from the use of the Elixir Water and I trust its excellent qualities will soon be widely known.

Truly yours,
John H. Kirkpatrick,
Ex-Representative of Wise County in the 24th Legislature of Texas.

(TESTIMONIALS Continued)

LOS ANGELES, CAL., Nov. 27, 1894.

To The California Elixir Spring Water Co.

GENTLEMEN:—I have used your Mineral Spring Water and gladly testify to its excellency as a medical remedy and to its purity. I have suffered for years with Chronic Indigestion and Constipation. My sufferings have been quite serious for more than six years past; have doctored and used various medicines and various Mineral Waters as well. Nothing seemed to touch my ailment. I began using your water on the first of June, 1894, and continued until Nov. 1st, following; I feel now quite well, in fact entirely cured. I have gained twelve pounds in weight. I can truly recommend it to all who suffer as I did.

Respectfully,

C. W. CLARK,

Residence No. 475 Temple Street, Los Angeles.

AMONG our numerous patrons and for further reference we take the liberty to name the following residents of Los Angeles city and county who have used our Elixir.

L. C. Anderson, - Alhambra.
David Bayles. - Alhambra.

And the following residents of the city of Los Angeles.

Anderson & Thompson
G. Basler
C. W. Clark
C. E. Crager
J. Conrad
A. J. Davis
G. N. Freeman
Jacoby Brothers
Kansler & Morganson
Chas. A. Keyser
Mrs. M. E. Johnson
H. K. Williamson
John Langley
M. Mayles
Dr. Ravlin
Reynolds & Co.

B. L. Bear
A. Campania
Albert Cohn
O. W. Childs
M. C. Curran
C. Drake
Rusk Harris
Robert Kern
James King
Mrs. S. Knecht
Simon Maier
E. Landt
S. Liddell
T. Mosgrove
Dr. Rumpan
"The Thalia"

(LIST OF PATRONS Continued.)

Russian Herb Institute
Russ & Lewis
Fred Smith
A. Vignolo
J. J. Weir
Dr. Wells

Apffel & Co.
J. C. Hardman, Riverside, (Agent)

I. D. Rodenberg
C. B. Rogers
G. B. Scannell
H. Stuhr
W. M. VanDyke
F. Viola & Co.

W. J. Hole, Whittier, (Agent)
C. F. Schader & Co., Santa Monica, (Agent)
F. B. Elwood, Alhambra, (Agent)
T. J. Martin, Pasadena, (Agent)

9–188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 3 1895

WASHINGTON, D. C., ____, 189__

Mrs. Becker & Fleming
Pomona So. Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 23 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours,

F. H. NEWELL.

1. What is the location of your well? Township, 1 south; range, 8 west; section 3, or distance from town, of Claremont 1/4 mile, Pomona 4 miles

2. In what year was your well completed? Water Gravel What is size or diameter? 7 inch

3. How was it put down; dug, driven, bored, or drilled? bored & drilled

4. What is the total depth in feet? 103 & 127 What was depth to water? twenty four & twenty seven ft

5. If well is cased, what is size and length of casing? seven inch No 16 Iron pipe

6. Does this well flow—that is, is it artesian? no

7. If flowing, has the amount increased or decreased? —

8. If not flowing, does depth of water vary at different times of year? very little not more than 4 to 6 ft

9. How much water can be obtained from the well? from fifteen to forty inches Can it be easily lowered? no

10. What is the quality of water, is it hard, soft, salty, or alkaline? soft

11. If not flowing, how is water raised? we have tunnel 4300 ft to cut wells 100 ft below surface of ground

12. What was cost of well? from $300 to $600 Cost of pumping machinery? —

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? for domestic & Irrigating

14. Have you a record of the strata passed through? Yes after first or surface strata the strata strata was gravel & clay alternate from 6 ft to 17 ft in depth

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

P. W. Frost of Claremont Los Angeles Co Cal
is developing water near San Dimas Canon

Josiah Altkire of Pomona
Developing water inside of Pomona City limits

H C Oakley of Ontario Cal
Developing water at or near Lamanton Canon

Yours &c

Beckett & Fleming

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

APR 3 1895

WASHINGTON, D. C., ____, 189__

Mr. Le Seare
Pomona So. Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 23 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours,

F. H. NEWELL.

---

1. What is the location of your well? Township, 1S; range, 8W; section 4, or distance from town, ____

2. In what year was your well completed? 1888 What is size or diameter? 7"

3. How was it put down; dug, driven, bored, or drilled? Bored

4. What is the total depth in feet? 175 ft What was depth to water? 40 ft

5. If well is cased, what is size and length of casing? yes 7 in ~ 175 ft

6. Does this well flow—that is, is it artesian? yes

7. If flowing, has the amount increased or decreased? Varies with amt of rainfall

8. If not flowing, does depth of water vary at different times of year? yes

9. How much water can be obtained from the well? 100 Gal per Minute Can it be easily lowered? ____

10. What is the quality of water, is it hard, soft, salty, or alkaline? Soft as ordinary river water

11. If not flowing, how is water raised? ____

12. What was cost of well? ____ Cost of pumping machinery? ____

13. Is the water used for any other purpose besides domestic supply; is it used for irrigation? yes

14. Have you a record of the strata passed through? yes ~ Soil & alternate layers of Clay & Sand gravel & Boulders

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

I have run a tunnel about 1/2 mile & have flowing stream from about 1 1/2 Cu ft of water per second. There is no rock except boulders at least to the depth of several hundred ft. The water is artesian & confined between two impervious strata of something that is here called Cement Clay. In this water strata I have found bones & teeth of the Mastodon

Very Truly Yours
C. Deaver

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 26, 1895

Mr Elias Finck
Pomona Cal. Los Angeles Co

APR 29 1895

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

1. What is the average depth in feet of the wells in the part of the county in which you live? 23 and 30 ft

2. Are there any notably deep wells near you? No

3. Do any of these flow—that is, are they artesian? No

4. Have any deep wells been drilled or put down without obtaining water? No wells of that description in these parts.

5. Is there any difficulty in obtaining water by wells of moderate depth? No

6. Is the water of good quality; is it hard or soft, alkaline or salty? Good quality, Soft

7. Is there an ample supply, or can the wells be easily exhausted? Ample supply, use nothing but hand pumps, have used all day without Exhausting.

8. What kind of machinery, if any, is used to raise the water? Pumps

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Used for domestic supply only.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

I live six miles North of Pomona in the foot-hills. Our part of the County is peculiar to that in the valley - and of a strange formation. Its is about 800 ft higher than Pomona - hilly, and small vallies between. the soil ranges from about a foot to 25 ft in depth, and under neath is stratified rock-water. Can be had in any of the low places and in great many places on the side of the hill. which shows that the water comes through the stratified rock, which is proven in my digging my two wells. Back of the foot-hills, about two miles, is the mountains which are covered with snow in the winter & spring - Pomona is supplied with artesian water for domestic use. And for irrigation, the water comes from San Antonia creek in the Mountains 8 miles away. Live Oak Canyon runs through my place - north & South water all through winter till June, when it decreases for about 2/3 the way - 3 miles - it becomes stationary until the winter rains sends it booming the full length. During the summer at my place the Canyon is dry - I have commenced developing water in it - for the under flow I have so far got 4 inches - (3,200 gals) water - I have commenced on a level by tunnel, the depth at the end of 400 ft 15 ft from the surface - (the canyon rises from lower end to upper end) when I strike bed rock I will run cross ways of canyon & Expect to get 15 inches of water 17,500 gals in 24 hours flow.

that is in the dry season remember there is not a drop of water running on the surface of the Canyon at my place. At the head of the Canyon 2 miles away, but back against the Mountains, the stream is about as large as your arm, (dry season) One thing about the water I got last Summer (4 inches), remains about the same, with perhaps about an increase of ½ more during the Winter, when the creek is full from bank to bank - 6 ft wide, about 8 inches deep. It seems that the Winter rains does not effect much the under flow, Another peculiarity about this water, late in the fall about Oct 1st it begins to slightly increase, also the water on the surface at the head of the Canyon, which came down

The Names & persons best informed about the water development in Pomona are Dr Reeves Nickols President & Pomona Land & Water Co. and also Peter Fleming & the Lahr Bros &c &c -

Yours &c
Elias Finck

7/3 of the way as big as my leg - before we had a drop of rain, (rain commenced Dec 5th 1894) - this increase was in Oct & Nov. The general idea of the increase is, that in the fall, the days are shorter, & nights longer & cooler, which makes the Evaporation less, but how about the water in the Tunnel, it does not increase after the rains sets in; & decreases very little in the Summer; I hope what little information I have given will be of some value to you, I think it would pay to have the Government send you out to Cal, during the Dry season. Our water source is an interesting study.

9—188.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: SCHEDULE FOR DEEP WELL.

WASHINGTON, D. C., APR 6 1895, 189

Mr Citizens Water Co.
Fred. J. Smith Pomona Los Angeles Co Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain facts relating to deep wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence. APR 22 1895

You are earnestly requested therefore to fill out the following blank, which relates to a single well, as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways, and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly, yours, F. H. NEWELL.

---

1. What is the location of your well? Township, ------; range, ------; section ------, or distance from town, 2 miles

2. In what year was your well completed? 1888 What is size or diameter? Nine inch

3. How was it put down; dug, driven, bored, or drilled? bored & driven

4. What is the total depth in feet? 300 What was depth to water? 198

5. If well is cased, what is size and length of casing? Iron casing double, nine inch No 14 iron

6. Does this well flow—that is, is it artesian? Yes

7. If flowing, has the amount increased or decreased? Decreased by other wells & subsequently increased by cutting 14 feet below the surface

8. If not flowing, does depth of water vary at different times of year?

9. How much water can be obtained from the well? Sixteen inches under 4" pressure Can it be easily lowered? No

10. What is the quality of water, is it hard, soft, salty, or alkaline? Excellent very slightly hard.

11. If not flowing, how is water raised?

12. What was cost of well? $1200 Cost of pumping machinery? ——

13. Is the water used for any other purpose besides domestic supply; ~~is it used for irrigation?~~ ——
For domestic purposes only —

14. Have you a record of the strata passed through? No. not exactly. Cement gravel & clay strata all the way down

15. Please give, on back of this sheet, any facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

1789b5m

Richard Bird of Chino
has about 15 wells in same neighborhood
and can probably furnish you with
complete data as to Static &c

Ref. J. Smith

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr H C Bailey
Wilmington Los angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 11 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? Surface 8 to 30 average 25 artesian 200 to 600 average about 300

2. Are there any notably deep wells near you? I know of none much if any more than 600

3. Do any of these flow—that is, are they artesian? A large majority of 200 feet and more are artesian. Some with a 12 in flow av flow 3 in

4. Have any deep wells been drilled or put down without obtaining water? None as deep as 600 ft And only 2 as deep as 500 that I can now remember

5. Is there any difficulty in obtaining water by wells of moderate depth? None A solid body underlies the whole county depth is regulated by the elevation

6. Is the water of good quality; is it hard or soft, alkaline or salty? First surface hard and in most places impregnated more or less with different minerals and salts second strata 40 to 80 ft pure except in some cases sulphur

7. Is there an ample supply, or can the wells be easily exhausted? Have never known any exhaustion except where one artesian well has exhausted one below it on the same flow

8. What kind of machinery, if any, is used to raise the water? Ordinary artesian Tools Mostly driven by steam occasionaly Horse power

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? About 4 6 per ct is used for irgation

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

This report covers a district within a radius of 20 miles from Longbeach except a mountain range with and west of San Pedro light house about five miles wide immediately on the coast where water is of recent and in the lowest places a valley require a depth of 80 feet and more to the first water: How far along the coast the same conditions prevail I dont know

Respectfully Your Obedeant

Lieut H L Bailey

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr. J. Bullock
Puente So. Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 10 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? thirty feet surface water six feet in county two mile wide six long

2. Are there any notably deep wells near you? I have one one hundred forty seven feet

3. Do any of these flow—that is, are they artesian? mine flow about ½ inch I put one down four miles from here surface water 100 feet 105 artesian water rose 25 feet

4. Have any deep wells been drilled or put down without obtaining water? no

5. Is there any difficulty in obtaining water by wells of moderate depth? no

6. Is the water of good quality; is it hard or soft, alkaline or salty? surface water hard some alkali artesian water hard no alkali some corn very healthy

7. Is there an ample supply, or can the wells be easily exhausted? surface not much forty seven feet seven feet water in gravel 104 feet artesian 147 artesian both water for pump

8. What kind of machinery, if any, is used to raise the water? wind mill

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? no

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

there is some artesian flowing wells three miles below me but none less than fourteen miles above or north some ten miles south on the other side of a range of hills nature of soil where I put down well 141 feet 8 feet sloby then clay about forty feet seven feet gravel full of water then clay to 102 feet about one foot sand four inches cement water rose to surface clay to 140 then sand for seven feet water flows about ± inch two feet above the ground water from there contians a sediment like corn rust but very light weight settles in bottom of wooden water tank to the depth of ± inch in three months have lived here eleven year acreage ten in family no sickness no deaths in that time there is some well ½ miles and one miles above me east about 150 deep water stands about 66 feet from surface one well had lead water in bottom so it could not be used W. R. Rowland of this place lives two miles east of me was born there is the best man to send to in regard to water any wells around here would make good pumping well to irrigate at a depth of about forty feet

Your Resp
J Bullock

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 26, 1895

Mr. Francis M. Balfour
Pomona So. Angeles Co. Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 10 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live?

75 ft to 150 ft.

2. Are there any notably deep wells near you?

2 to 3 hundred feet

3. Do any of these flow—that is, are they artesian?

Yes.

4. Have any deep wells been drilled or put down without obtaining water?

Yes.

5. Is there any difficulty in obtaining water by wells of moderate depth?

No, not in most places.

6. Is the water of good quality; is it hard or soft, alkaline or salty?

Good quality.

7. Is there an ample supply, or can the wells be easily exhausted?

Run down considerably in dry seasons

8. What kind of machinery, if any, is used to raise the water?

In 'domestic purposes' wells 75 to 100 ft deep. Gas engines.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation?

For irrigation

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

There is considerable water being developed by tunnelling in, near the foot-hills. Messrs. Becket & Fleming as also Mr. C. Seaver & Mr. E. Phelan are engaged in thus developing water & can furnish you precise information in this regard.

Respectfully,

Frank M. Balfour.

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 26, 1895

Mr B. Homer Fairchild
Pomona Cal. Los Angeles Co

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 10 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? From 200 ft to 400 ft

2. Are there any notably deep wells near you? None that have been a success

3. Do any of these flow—that is, are they artesian? a small flow only

4. Have any deep wells been drilled or put down without obtaining water? yes

5. Is there any difficulty in obtaining water by wells of moderate depth? in certain localities No.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Soft & very excellent quality

7. Is there an ample supply, or can the wells be easily exhausted? a fairly ample supply

8. What kind of machinery, if any, is used to raise the water? "Gas or Gasoline" Engines mainly.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? both domestic & irrigation

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Dr. B Homer Fairchild is long since dead.
I answer your questions as best I can
Yours truly

J. E. McCarns

Pomona California
April 4th 1898

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 25, 1895

M^r H A Holme
Pasadena Los Angeles Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 10 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? 100 ft

2. Are there any notably deep wells near you? Only one in this place

3. Do any of these flow—that is, are they artesian? South East from Pas. 4 Miles, there are

4. Have any deep wells been drilled or put down without obtaining water? One 1000 ft

5. Is there any difficulty in obtaining water by wells of moderate depth? Not in Certain Localities

6. Is the water of good quality; is it hard or soft, alkaline or salty? Good & Soft

7. Is there an ample supply, or can the wells be easily exhausted? A good Supply

8. What kind of machinery, if any, is used to raise the water? Wind Mills & Gasoline Engines

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? used for Irrigation and Family use

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

3 Miles North near the foot Hills there have been 4 or 5 Wells dug & Water obtained at a depths of 30 ft. Elivation 1200 ft. as you go near the Ocean. there are a great many Artesian flowing Wells. The following persons would be able to give more information.

I de Booth Shook. B F Butler. Robt Lytle.

Yours Respectfully

H A Holme

April 4th 95

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr W. S. Andrews
Sierra Madre So. Angles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 10 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live?

There are no wells in Sierra Madre, dug

2. Are there any notably deep wells near you?

driven or bored. We get all water from the mountains conducted by pipes

3. Do any of these flow—that is, are they artesian?

4. Have any deep wells been drilled or put down without obtaining water?

5. Is there any difficulty in obtaining water by wells of moderate depth?

6. Is the water of good quality; is it hard or soft, alkaline or salty?

7. Is there an ample supply, or can the wells be easily exhausted?

8. What kind of machinery, if any, is used to raise the water?

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation?

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Two or three miles below - South - of us there are Artesian wells of from 50 to 350 feet deep - there being an artesian belt along there and in which they get a fine flow of soft water. and which is utilized for irrigation purposes.

Yours

W P Andrews

Sierra Madre Col

Apl 2/95

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr R. H. Dawson
Glendora Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 10 1895

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Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? The range in depth is from 35 ft to 210 ft.

2. Are there any notably deep wells near you? None have a greater depth than 210 ft in this Locality.

3. Do any of these flow—that is, are they artesian? Water in a few instances rises a few feet showing an artesian tendency.

4. Have any deep wells been drilled or put down without obtaining water? Yes, a number have been sank to the depth of 160 ft without water.

5. Is there any difficulty in obtaining water by wells of moderate depth? Yes singly except near a central chain of hills passing through the Valley.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Our well water in this locality seems to be of an excellent quality, soft & free from alkaline substances.

7. Is there an ample supply, or can the wells be easily exhausted? The supply is fairly good, but is ordinarily inclined to be small in Dalleme.

8. What kind of machinery, if any, is used to raise the water? Wind mills are commonly used. In some instances Gasoline Engines are used.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? It is used for both but is required largely for irrigation.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

over

This Valley is composed of the deposit from the adjacent Sierra Madre range of mts.

In close proximity to the chain of hills before described and also near the base of the Mountain range, there appears to be a series of adherent clay stratums near which water is found at a comparatively shallow depth but as you pass farther from the hills the clay stratums in a marked degree disappear leaving only the ordinary disintegrated granite and alluvial with an occasional sand or gravel vein of a few inches depth only. Thus you will observe it is much more dificult to obtain water toward the center of the Valley than near the hills.

For further particulars, and probably some Valuable data I would respectfully refer you to either of the following gentlemen in the order named.

Geo. D. Whitcomb Jno. E. Daly

or J. J. West.

Yours very Truly

R. P. Dawson

Glendora Calif

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr Harvey Lindley
Whittier Los Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 9 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? From 30 to 60 Ft-

2. Are there any notably deep wells near you? One at Whittier State School 200 ft- One about three miles South 250 ft-

3. Do any of these flow—that is, are they artesian? The last one named flows and is Sulpur water

4. Have any deep wells been drilled or put down without obtaining water? None

5. Is there any difficulty in obtaining water by wells of moderate depth? No

6. Is the water of good quality; is it hard or soft, alkaline or salty? Whittier State School well and shallow wells generally good water

7. Is there an ample supply, or can the wells be easily exhausted? plenty of water in them

8. What kind of machinery, if any, is used to raise the water? Steam pumps on deep Well at School

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Some times for Irrigation but not much

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

(over)

Wrote to Sherman Wiggins
Whittier

" " George Haggard
Whittier

9—187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr H N Jarvis

Inglewood Los Angeles Co., Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 8 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? about 100 ft

2. Are there any notably deep wells near you? None

3. Do any of these flow—that is, are they artesian? They do not

4. Have any deep wells been drilled or put down without obtaining water? a few near the mountains where the rock made drilling expensive

5. Is there any difficulty in obtaining water by wells of moderate depth? None Whatever

6. Is the water of good quality; is it hard or soft, alkaline or salty? The very best - not hard

7. Is there an ample supply, or can the wells be easily exhausted? The supply is inexhaustible

8. What kind of machinery, if any, is used to raise the water? Mostly wind power. Some is raised by Gas Engines

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? For both. We have powerful springs 2 to 3 miles near the mountains & pipe

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

I did not have room on the other side to finish. We have very fine Springs of water about 8 miles from here which flow a large volume of water which is Carried in pipes all over the valley and Supplied under pressure to the owners of lands who~~se~~ ~~lands~~ have a water rights in these Springs. These Springs are very uniform in the amount of flow being very little affected by dry or wet Seasons and the water is very pure when it leaves the Springs - The cost to the Consumers is very low and the amounts so far abundant - Should you need further information I would refer you to

Nelson C. Bunch Esq - Secretary Verdugo water Co Arcadia California or to

George B. Woodbury - Glendale California

Very Truly Yours

H. N. Jarvis

Arcadia Los Angeles Co
California April 2nd 1895

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 26, 189 5

Mr Wm J Dalton

Pomona Los Angeles Co, Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 8 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? 60 feet
Water for domestic use is obtained at 30 ft. in many places.

2. Are there any notably deep wells near you? Over 100

3. Do any of these flow—that is, are they artesian? Over 100 Artesian

4. Have any deep wells been drilled or put down without obtaining water? very few.

5. Is there any difficulty in obtaining water by wells of moderate depth? No

6. Is the water of good quality; is it hard or soft, alkaline or salty? Water is of good quality

7. Is there an ample supply, or can the wells be easily exhausted? The supply is ample.

8. What kind of machinery, if any, is used to raise the water? No machine is used.

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? It is very largely used for irrigation.

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Dear Sir:- For information in regard to Artesian wells I refer you to the Pomona Land & Water Co.

Also to the citizens Water Co.
Fred. J. Smith.

Also to Bucket & Silcox.
All of Pomona,
California.

Yours &
W. T. Klaton

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 25, 1895

Mr. G. U. D Braud
Pomona Los. Angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 8 1895

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

Kindly give a prompt reply.

Very truly yours, F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? 60 to about 300 feet — many of them 120 to 190 feet — average about 150 feet

2. Are there any notably deep wells near you? None that I know of over about 300 to 400 feet

3. Do any of these flow—that is, are they artesian? Two of the deepest do not flow because they are not in the region a belt where the artesian water is found

4. Have any deep wells been drilled or put down without obtaining water? Yes to a depth of over 300 feet but not in what is considered the artesian belt

5. Is there any difficulty in obtaining water by wells of moderate depth? It can only be obtained in certain locations — I mean artesian water to flow over the top

6. Is the water of good quality; is it hard or soft, alkaline or salty? Very good — nearly soft

7. Is there an ample supply, or can the wells be easily exhausted? The supply is limited as to certain territory and to quite a large number of wells

8. What kind of machinery, if any, is used to raise the water? Nearly all of the artesian wells — possibly all flow naturally

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes both to irrigate and for domestic use

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Surface or well water is found in close proximity to Pomona at a depth of from 16 to 75 feet

South of Pomona about 3 miles there are damp lands where water can be had in wells at a depth of from 6 to 12 feet in summer and less in winter a this season of the year

---

The artesian water is found only in certain belts or districts one about 1½ miles North of this town and extending a mile or two – to the N. E. and in a S. E. direction there are a few wells about 4 to 6 miles away

The domestic supply for the city of Pomona comes from the artesian wells N. and N. E. of Pomona in iron pipes and is considered very good water – nearly soft but not entirely so

There are about 100 artesian wells within 5 miles of Pomona

Names

Pomona Land & Water Co.
Pomona
Cal.

Citizens Water Co.
Pomona
Cal.

The above cos. ought to be able to give you information Nearly all the artesian wells are put down with a seven inch iron pipe and flow over the top of the ground

Any information I can give will be cheerfully given

Yours truly
saved now

G. V. D. Brand
Pomona
Los Angeles Co
Cal. April 1-95

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr E. F. Badger

Azusa Los angeles Co. Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 8 1895

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Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? None in this Township less than 80 feet

2. Are there any notably deep wells near you? one 240 feet.

3. Do any of these flow—that is, are they artesian? No

4. Have any deep wells been drilled or put down without obtaining water? No

5. Is there any difficulty in obtaining water by wells of moderate depth? Yes

6. Is the water of good quality; ~~is it hard or soft, alkaline or salty?~~ Yes

7. Is there an ample supply, ~~or can the wells be easily exhausted?~~ Yes

8. What kind of machinery, if any, is used to raise the water? Ordinary pumps

9. Is the water used for any other purpose besides domestic supply; ~~is it used for irrigation?~~ No

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value. Nearly all domestic water is taken from the San Gabriel River at Canon and conveyed in pipes and ditches of Irrigating Companys

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 25, 1895

Mr Henry T Wheeler
Pomona Los Angeles Cal.

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

APR 8 1895

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Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? Impossible for me to tell. Thousands of wells in L.A. county.

2. Are there any notably deep wells near you? No.

3. Do any of these flow—that is, are they artesian? Yes - many. Think there are a - best an hundred artesian well in and near Pomona

4. Have any deep wells been drilled or put down without obtaining water? Yes:- water sometimes rises, then disappears. By deep I mean moderately so - say 200 ft.

5. Is there any difficulty in obtaining water by wells of moderate depth? In most places - No. at, say, from 40 to 150 ft.

6. Is the water of good quality; is it hard or soft, alkaline or salty? Here, of excellent quality: quite soft, especially as compared with L.A. city water. In some places alkaline

7. Is there an ample supply, or can the wells be easily exhausted? Usually ample. Last year, said to have been driest for 12 or 15 years, some became nearly or quite dry

8. What kind of machinery, if any, is used to raise the water? Windmills & few oil engines

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation? Yes - piped and stored in reservoirs - small and great - for irrigating

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

(over)

The artesian wells here are in what is called "the artesian belt". They are found within well defined limits: - perhaps 100 or 200 feet either side of these limits no flowing wells have been obtained. Think most of them have somewhat diminished since sinking - some a little, others much or entirely.

Near me is an extensive underground tunnel from which has been obtained, the last I heard, about 125 miner's inches. Peter Fleming, Pomona, will give you, probably, all information about this - as he made it. He can also, I presume, tell all about a similar tunnel in another part of town, called the Atkins - Phelan tunnel. This source of water supply seems more constant and reliable than wells or artesian wells.

L.M. Holt, and Fred L. Alles, both of Los Angeles (city) can, if they will, give you much more information than I. The former, especially, has been of late investigating the subject of percolating waters. He has stated that he believes that if all the percolating water can be utilized it will exceed in volume that of all other systems combined - flowing surface streams, wells, and storage systems.

Truly, Henry H. Wheeler

P.O. address

1, April, 1895

HENRY H. WHEELER,
POMONA, CAL.

9–187

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPHIC DIVISION: ARTESIAN WELLS AND GROUND WATERS

WASHINGTON, D. C., Mar 27, 1895

Mr J. F. Baiing or A Boddy
Monrovia Los. Angeles Co. Cal

DEAR SIR:

In the examination into the water resources of the United States, "including the investigation of underground currents and artesian wells," this Survey is endeavoring to obtain important facts relating to wells, whether flowing or furnishing water to pumps. As it is obviously impossible, on account of expense, to visit all places, the attempt is made to extend and complete the information by correspondence.

You are earnestly requested therefore to fill out the following blank as fully as possible and return it in the accompanying envelope, which requires no postage. The results of these replies will be combined with facts obtained in other ways and will be published in condensed form for the information of the public.

APR 8 1895

Kindly give a prompt reply.

Very truly yours,

F. H. NEWELL.

---

1. What is the average depth in feet of the wells in the part of the county in which you live? No wells near Monrovia of any kind

2. Are there any notably deep wells near you?

3. Do any of these flow—that is, are they artesian?

4. Have any deep wells been drilled or put down without obtaining water? a well was put down 240 ft before Striking water

5. Is there any difficulty in obtaining water by wells of moderate depth?

6. Is the water of good quality; is it hard or soft, alkaline or salty?

7. Is there an ample supply, or can the wells be easily exhausted?

8. What kind of machinery, if any, is used to raise the water?

9. Is the water used for any other purpose besides domestic supply; is it used for irrigation?

10. Please give, on back of this sheet, any other facts which you may deem of importance in this connection and also add the names and addresses of persons who can probably give other information of value.

Monrovia is at foot Hills we obtain our water from mountain Springs

J. S. Killian five miles South of here has Surface wells Raises water for Irrigation with gass Engine his Po is El Monte Los Angeles County Cala.

A. B. Chapman has artisian wells Eight miles west of here his address is San Gabriel Los Angeles County Cala.

Yours Respectfully
J. F. Banning

Los Angeles

9–255.

WELL SCHEDULE

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

Jan. 18, 1905

~~Mr.~~ To City Clerk,
Alhambra, Cal.

DEAR SIR:

In its study of the water resources of the United States, which this Survey is making with the view of publishing the results for the benefit of the people, an attempt is being made to obtain important facts relating to wells, whether flowing or not. As it is impracticable, on account of expense, to visit all places, the endeavor is made to extend and complete the information by correspondence. If you will aid in this work by furnishing the data requested in the following list of questions your assistance will be much appreciated. If you can not supply all the data, kindly answer such of the questions as you can, *a partial report being much better than none.*

Very respectfully,

CHARLES D. WALCOTT, *Director.*

Send reply in accompanying envelope, which requires no postage, to .....

1. Name and address of owner, A. C. Weeks
2. Name and address of driller, J. C. Johnson
3. Well is located on West side of road leading from Main St to Alhambra Road
   at a distance of 1/2 miles in a Northeasterly direction from Alhambra post-office
   In States having public land surveys give location by sections: Section 10, Township 1. S., Range 12. W.
4. Is well located on a hill, slope, plain, or in valley? Valley
5. Give elevation above sea, railroad, river, or post-office, if known, 485. ft
6. Was it dug, driven, bored, or drilled? Bored When completed? Sept 1900 Diameter, 12 inches
7. Depth of well, 294 ft Depth to principal source of water, 248 ft
8. Was water found in sand, clay, gravel, or other material? Gravel
9. Were any other water-bearing beds found? No If so, give depth of each, — —
10. Does well flow? No If so, how high will water rise above surface? — If not flowing, how near surface does the water rise? 185 ft
11. Temperature of water at well mouth, — At bottom of well, —
12. Amount of water obtained? 35 Miners Inches Has supply increased or decreased? —
13. Does water level vary during the day? — During the year? — Describe, —
14. How is the water level affected by pumping? — —
15. Quality of water—hard, soft, salty, alkaline, iron, or sulphur bearing, Soft
16. How is water obtained at surface where not flowing? Gasoline Engine and Pumps
17. Size and length of casing, 12 inch - 248 ft
18. What use is made of the water? Domestic use and Irrigation
19. What effect has it on the health of the users? Good
20. Did the well strike solid rock? No If so, at what depth? —
21. **If you have a record of the beds passed through, kindly give it on the back of this sheet.**
22. If you have an analysis of the water, please give it on the back of the sheet.
23. The names and addresses of other well owners or drillers will be much appreciated.

02

over

H. A. Clapp
City Clerk. Alhambra Cal

Gravel	48 feet
Cemented sand and Gravel	44 "
Clay	2 "
Sand and Gravel	14 "
Gravelly Clay	36 "
Sand and Gravel	12 "
Gravel and Rocks	26 "
Gravelly Clay	54 "
Clay	12 "
Gravel (water)	46 "
	294 "

Pump is 28 feet above water Strata.

294
46
~~348~~

Los Angeles

Paper Los Angeles, Cal., Times

Date MAR 13 1906

A GUSHING WELL AT SAN BERNARDINO

[SPECIALLY CONTRIBUTED TO THE TIMES.]

San Bernardino gushing well.

SAN BERNARDINO CITY has one of the best water supplies in Southern California, both as to quality and as to quantity. The city owns its own water system. The supply is from two sources—from Lytel Creek, a sparkling mountain stream that comes from the melting snows of "Old Baldy," and from flowing artesian wells bored on lands owned by the city, and adjacent to its limits. The waters from Lytel Creek flow by gravity into a reservoir of 2,000,000 gallons capacity, and to this constant supply is added, when necessary, the water from the artesian wells, pumped into the mains by steam pumping plants. Our picture shows one of these wells —No. 4, Antil Pumping Station. The depth of this well is 1066 feet, the diameter of the pipe is fifteen inches, and the flow is 250 miners' inches. The photograph was taken last month.

4-14 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M. Henry Merrill

P. O.: Florence.

County: Los Angeles; Page: 40; Line: 28.

State: Cal.

1. What is the depth of your well in feet? 100 ft. What is the size of the pipe in inches? 7 inch What was the cost of the well? see opposite page

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

see opposite Page

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 2½ acres

5. What crops have been raised by the water from your well, and about how many acres of each?

All kinds raised in this section including grains fruit, Alfalfa &, &c.

C. O. P.—10m

Florence Los Angeles Co Calif
March 31st 1891

Robert P. Porter
Superintendent of Census

Dear Sir

Your note dated March 31st 1891 is just received. I desire to say that I have two artesian wells on my place, and being at a loss as to which one the census enumerator had in view in his report, I will give what information I can of both. They are each one hundred feet deep. each have 7 inch pipe. Such wells cost fifty cents the first fifty feet, and fifty cents additional each additional fifty feet. I have never endeavored to measure with any accuracy the flow per minute in either well. But the flow of each is regarded, by all acquainted with them, as excellent, or rather very abundant. I use each for irrigation purposes, irrigating readily from four to five acres per day when both are flowing. There seems no diminution of flow after several days of continued use. The water is excellent for drinking or culinary purposes, though somewhat hard. It is clear as a crystal at all times. The wells have never failed to yield abundant water whenever needed.

Very respectfully

H. D. Merrill

4/23 4/24 '91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: J. W. Bixby & Co.

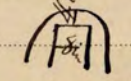
P. O.: Long Beach

County: Los Angeles; Page: 34; Line: 2.

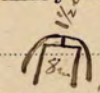
State: Cal.

---

1. What is the depth of your well in feet? 300 to 350 ft. What is the size of the pipe in inches? 8 in. What was the cost of the well? $600 to $700 each

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? One of these wells flows about four inches over the top of pipe (thus: )

~~3. How was this measurement made, or, in other words, how accurate do you consider it?~~

the other two about 1½ in (thus: )

the three together fill a 250000 gal. reservoir in about 10 hours

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? about 100 acres of mesa or upland

5. What crops have been raised by the water from your well, and about how many acres of each?

100 acres of blue gum (Eucalyptus) trees planted in forest for fuel (water going to waste large part of the time)

C. O. P.—10m

4/23 4/24 '91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. ~~Nathan~~ Jotham Bixby

P. O.: Long Beach.

County: Los Angeles; Page: 84; Line: 9.

State: Cal.

---

1. What is the depth of your well in feet? about 300 ft What is the size of the pipe in inches? 7 in. What was the cost of the well? about $1000.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? very little If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

could irrigate through say for alfalfa or corn about 40 acres with this averaged — our wells were originally bored to water live stock

C. O. P.—10m

4/23 4/24 '91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Michael Hungerford,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 27.

State: Cal

1. What is the depth of your well in feet? 896. What is the size of the pipe in inches? 7. What was the cost of the well? $700.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 40

5. What crops have been raised by the water from your well, and about how many acres of each?

Alfalfa 10 Corn 10 orchard and vegetable 10
wild grass for grazing 10 Wm M. Hungerford

C. O. P.—10m

'91
4/24
4/23

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., May 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Jno. E. Packard

P. O.: Pomona

County: Los Angeles; Page: 26; Line: 27.

State: Cal.

---

1. What is the depth of your well in feet? 350. What is the size of the pipe in inches? 7. What was the cost of the well? 7000.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? 4000

3. ~~How~~ was this measurement made, or, in other words, how accurate do you consider it? Very accurate

4. Has any of this water been used for irrigation? all. If so, how many acres have been watered in any one season? 300

5. What crops have been raised by the water from your well, and about how many acres of each? Oranges Corn Nursery stock &c 200 acres oranges &c

C. O. P.—10m

4/23 4/24 '91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Cassius C. Johnson

P. O.: Pomona.

County: Los Angeles; Page: 26; Line: 21.

State: Cal.

---

1. What is the depth of your well in feet? 160, 212, 450+55? What is the size of the pipe in inches? 1-6-3-9 in. What was the cost of the well? 6 in well 160 ft deep cost about $450 — do not know the cost of others as I sold the right to develop to Richard Gird, Chino Cal.

2. Have you measured the water from your well? have not. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? In my opinion three of their flow about seventy inches, one does not flow owing to other wells below it.

4. Has any of this water been used for irrigation? Most of it. If so, how many acres have been watered in any one season? cannot say as I only own 7 inches which we use on 30 acres for domestic & irrigating purposes

5. What crops have been raised by the water from your well, and about how many acres of each? most of the water is carried about six miles to Chino and is used for irrigating beets and other crops but cannot give the acreage

Resp't C. C. Johnson

C. O. P.—10m

4/23 4/24 91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Wm. Ramsaur

P. O.: Florence

County: Los Angeles; Page: 48; Line: 11

State: Cal

---

1. What is the depth of your well in feet? Have 3 wells 70 to 76 ft. What is the size of the pipe in inches? 7. What was the cost of the well? about $125.00 each

2. Have you measured the water from your well? have not. If so, how many gallons per minute flow from it? They flow from 1½ to 2 inches over top of pipe at the highest place which is in centre of pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes But only in extremely dry years. If so, how many acres have been watered in any one season? Can irrigate about 30 acres from one well during the season

5. What crops have been raised by the water from your well, and about how many acres of each?

My principal crops are Barley & Alfalfa

C. O. P.—10m

In this neighborhood we get artesian water at from 60 to 150 ft the flow is from ½ one to three inches By going deeper we sometimes strike a second strata and generally get a longer flow as a rule we strike water in sand & gravel and the water is very good we irrigate very little as our lands are damp and dont require us much as desire to make more than one crop But on our best lands we cut from 6 to 7 crops of alfalfa in a season without irrigation

Reply W P Ramsaur

4-23/24 91

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Sylvester Rogers

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 13.

State: Cal.

Compton April 15

1. What is the depth of your well in feet? The well is 270 feet What is the size of the pipe in inches? 7 inches What was the cost of the well? Cost $600. dolars

2. Have you measured the water from your well? have not measured it If so, how many gallons per minute flow from it? the flow is very lite Barly enuff for House use and Stock water none for Irigation

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? none. If so, how many acres have been watered in any one season? My land does not need irigation

5. What crops have been raised by the water from your well, and about how many acres of each? to raise A crop I rais A little corn and fruit. there is grait many wells with large flowes in this community mine is very lite

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/22/4/22 91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1 *, 1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mary Burlingame

P. O.: Compton.

County: Los Angelos; Page: 38; Line: 20.

State: Cal.

1. What is the depth of your well in feet? Two hundred and 2 feet What is the size of the pipe in inches? five inch What was the cost of the well? $2,19 75.

2. Have you measured the water from your well? about 7½ inches. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

by a squar on top of pipe

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? it can handel from 5 to 10 acrd

5. What crops have been raised by the water from your well, and about how many acres of each?

alfalfa and boarn and fruit, general farming

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/22/4/22 91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr H. B. Rice.

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 14.

State: Cal.

---

1. What is the depth of your well in feet? 130 ft. What is the size of the pipe in 1 inches? 1 inches? 1. What was the cost of the well? $250.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season? 5 or 6

5. What crops have been raised by the water from your well, and about how many acres of each?

none

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/22/4/72 91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C. Mar. 30, 1891.

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. J. B. Alexander

P. O.: Artesia

County: Los Angeles; Page: 33; Line: 14

State: Cal.

1. What is the depth of your well in feet? 258. What is the size of the pipe in inches? 7. What was the cost of the well? $320.

2. Have you measured the water from your well? yes If so, how many gallons per minute flow from it? flows 1½ inches over the top

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? It will irrigate 40 acres

5. What crops have been raised by the water from your well, and about how many acres of each? A mixed crop vegetables hay corn and grain. Yours &c

C. O. P.—10m

As I have stated the better qualities of this well I will just state some on the contrary This well is a fine well in one respect and in another it is not.

This well has loose pipe in it Which when caped it will uncaple and rais right out of the ground if there isnt a lever accross the top of the cap, when caped and all of the water shut of that can be. There is about one third of the watter which flows through the pipe at the couplings Secondaly I have erected a 3- 3 feet box 18 feet high from the surface and the watter raises and flows over the top of this

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

7/22/4/22 91

Washington, D. C., Apr. 8, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Henry Putney

P. O.: Florence, Cal.

County: Los Angeles; Page: 249; Line: 29.

State: Cal

---

1. What is the depth of your well in feet? two 160 & 196. What is the size of the pipe in inches? 7in & 5in. What was the cost of the well? average about $1.50 per ft

2. Have you measured the water from your well? . If so, how many gallons per minute flow from it? about 180

3. How was this measurement made, or, in other words, how accurate do you consider it? It was measured by Deputy State Engineer to the best I think it is near correct

4. Has any of this water been used for irrigation? It has. If so, how many acres have been watered in any one season? I irrigate 10 acres from one well in six days

5. What crops have been raised by the water from your well, and about how many acres of each? There has been a great variety of fruit trees berries vegetables alfalfa from the 20 acres it has not been necessary to use the well more than one fourth of the time on the 30 acres in the dry part of the season

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/22/4/22 91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Mrs. T. Branch

P. O.: Artesia

County: Los Angeles; Page: 33; Line: 5

State: Cal.

---

1. What is the depth of your well in feet? 146 ft. What is the size of the pipe in inches? 4. What was the cost of the well? $400.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? By laying a Square across the Top of the pipe and the water flowed 2¾ Inches above the Top of the pipe

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 30 Acres

5. What crops have been raised by the water from your well, and about how many acres of each? Corn 30 Acres

C. O. P.—10m

Artesia Cal April 13th 1900

R. J. Porter Dear Sir

My well was dug 15 years ago the first year I used the watter from it to Rais a Corne Crop of 30 acres the Crop gealded when Sheld 65 Bus I never have used the well to any greate Extent Since Only for Domestic use the well leaks On the Out Side of the pipe about ¼ Of the Full flow of the well I Run the watter piped up the leakage Runs into the Alfalfa The Driest part of the Seasons in the winters and Spring it Runs in the High way

The Land in this Locality is Moist Lands watter with in 5 to 12 ft of the Surface you will Observe that By Good Tiding there is no watter needed there is Something Over 250 Artesians wells in this Locality and I dont Know of One a Running to Waste

My Crops has ben As good Since as they were when I Irigated I am a Raising Fruit of all Kinds Orinjes with Ought Irigation

Yours Respectfully

Jno. F. Branch

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

4/27/1/22 91

Washington, D. C., Mar. 30, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Wm R. Lawrence

P. O.: Artesia.

County: Los Angeles; Page: 33; Line: 18.

State: Cal.

---

1. What is the depth of your well in feet? 160. What is the size of the pipe in inches? 7–2. What was the cost of the well? 87 60.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

Fifteen years ago it flowed 1¼ inches but had bad luck with it that shut off the flow to one ¼ inch.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? at first. If so, how many acres have been watered in any one season? ten to twelve

5. What crops have been raised by the water from your well, and about how many acres of each?

corn, garden stuff, orchard in all say 12 acres at present only used for garden & domestic purposes

W. R. Lawrence

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/21/4/21

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3 — 30 —, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Leander Hallett,

P. O.: ~~Artesia~~, Carmenita

County: Los Angeles, ; Page: 33 ; Line: 2.

State: Cal.

---

1. What is the depth of your well in feet? 106 ft. What is the size of the pipe in inches? 7 in Diameter What was the cost of the well? $100.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

My Well flows over the pipe 1/2 inch at the top of the ground and will raise in the pipe 5 ft above the surface water soft with but very little Mineral Water only used for domestic use and Garden

Yours Truly Leander T. Hallett

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/21/21

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. John Holmgreen

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 12.

State: Cal.

---

1. What is the depth of your well in feet? 149. What is the size of the pipe in inches? 7. What was the cost of the well? 224.00.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? The Flow of my Well will vary from say 2½ miner inches, in the Spring, to barely a flow over the Pipe in Fall,

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? ½ Acre Garden Patch about one foot above Surface.

5. What crops have been raised by the water from your well, and about how many acres of each?

John Holmgreen.

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/21/4/21

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mrs James N. Shepard

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 19.

State: California.

---

1. What is the depth of your well in feet? 1411. What is the size of the pipe in inches? 7. What was the cost of the well? The present cost of such wells now is about $1.25 per foot

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? very little If so, how many acres have been watered in any one season? as our soil is damp and does not need it

5. What crops have been raised by the water from your well, and about how many acres of each?

We raise seven crops of alfalfa in one season without irrigation also good corn & potatoes fruits &c

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/8/21/21

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Jas. K. Holliday

P. O.: Artesia

County: Los Angeles; Page: 33; Line: 10

State: Cal.

---

1. What is the depth of your well in feet? ..... What is the size of the pipe in inches? ..... What was the cost of the well? .....

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? ..... If so, how many acres have been watered in any one season? .....

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

April 10th 91

Norwalk Los Angeles Co Cal

the depth of my well is 270 feet pipe 7 inch 16 of an inch thick in joints 2 feet long pipe is double joint being 1 foot part this is to make it hair the pressure of forcing down which pressure is one hundred tons or over at times pipe cost 40 cts pr foot single or 80 double my well cost 4 hundred & 24 dollars counting all

2 I have not measured the water I have 1 inch flow that is by puting a Strate edge cros the pipe it rises 1 inch above the pipe this water we got at 2 hundred feet 70 feet we found no water I can fill a reservoy 30 feet square 2 feet deep in 12 hours you can judge the amount of water for your self

3d I never have used water for Irrigating my land does not require it I can rais 2 crops with out the use of water I use it for stock & house purposes the surfis water is only 4 feet and is not fit for house use as it is strong of salt or alkly the artesian water is pure mountain water what hair the land requires water this well will wet up 25 acres or more as for crops any thing can be raised here orchards in the valy never need water corn & potatoes can be grown on the same land yet it is 6 months betwixt showers not so on the mesa or hy land beets Alfalfa or vines never need watering here their is wells that flow 6 or 7 inches 5 miles south of her the land slants to the east which is 10 miles the fall is about 10 feet to the mile or their about their is going wells at 30 & 40 feet 8 miles from here good pure water in alkly lands this is as near as I can inform you on the well problem

J R Holliday

4/21 4/21

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3/30 *, 1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Herman E. Rowland

P. O.: ~~Artesia~~ Norwalk

County: Los Angeles; Page: 32; Line: 11.

State: Cala.

1. What is the depth of your well in feet? 450 ft. What is the size of the pipe in inches? 4 in. What was the cost of the well? I dont know the party is dead

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? —

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season? —

5. What crops have been raised by the water from your well, and about how many acres of each? None We grow our crops without Irrigation

C. O. P.—10m

4/21 4/21

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3 - 30 -, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Messrs. E. J. Gillespie,

P. O.: Artesia,

County: Los Angeles, ; Page: 33 ; Line: 17.

State: Cal.

---

1. What is the depth of your well in feet? 249. What is the size of the pipe in inches? 7. What was the cost of the well? $360.00.

2. Have you measured the water from your well? yes. ~~If so, how many gallons per minute flow from it?~~ it will flow 1½ in over top of pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

4/21 4/21

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4 — 1 —, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: W. W. Lewis & Pierce,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 2.

State: Cal.

---

1. What is the depth of your well in feet? 293 ft. What is the size of the pipe in inches? 7 inch. What was the cost of the well? $400.00 17 years ago.

2. Have you measured the water from your well? have not. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? It flows 2½ inches over a 7 inch pipe measured by placing a board straight across the pipe edge ways.

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 30 acres

5. What crops have been raised by the water from your well, and about how many acres of each? 10 acres of Alfalfa — 10 acres of corn, 3 acres of potatoes, garden and orchard and 4 acres of tomatoes.

C. O. P.—10m

My Well has been a success-when first put down it flowed 4½ inches over a 7 inch pipe. It has 60 ft. of sand in it at present-which was put in to check the flow as it was uncontrollable in caping it down-and 2½ inches of water is all I can use- the well could be put down now with less cost than what it could 17 years ago.

L. H. Peirce.

4/21 4/21

[7-2148]
Eleventh Census
of the
United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., March 31, 1891.

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Dwight Crum

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 26.

State: California.

---

1. What is the depth of your well in feet? About 209. What is the size of the pipe in inches? 6 inch. What was the cost of the well? Donot know

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

None.

C. O. P.—10m

over

The well was bored when I bought the ranch and he has now left the country so cannot answer the questions more definitely.
I keep the well capped down but upon loosening the cap the water rises 2½ inches above top of pipe.

Respectfully D. M. Crane

4/21 4/21

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Simon Stockwell

P. O.: Compton.

County: Los Angeles; Page: 67; Line: 14.

State: California.

---

1. What is the depth of your well in feet? 140. What is the size of the pipe in inches? 7. What was the cost of the well? $2,240,40 with Board & Mon $25,40

2. Have you measured the water from your well? ____. If so, how many gallons per minute flow from it? We measure in this way as the water boil over the pipe or come up through pipe—

3. How was this measurement made, or, in other words, how accurate do you consider it? — we take a piece of tin 10 in Long By 10 high place over the caste of well and the height water — on tin is measured right place

4. Has any of this water been used for irrigation? on my. If so, how many acres have been watered in any one season? 40 acres

5. What crops have been raised by the water from your well, and about how many acres of each? alafalfa for Hay This 7 in well will water about 2 acres in 12 hours in dry time — — in good Shape

C. O. P.—10m

4/21 4/21

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Ada Darby.

P. O.: Compton.

County: Los angeles; Page: 38; Line: 26.

State: Cal.

1. What is the depth of your well in feet? ..... What is the size of the pipe in inches? ..... What was the cost of the well? .....

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it? There is a mistake in the report our wells are not Artesian

4. Has any of this water been used for irrigation? ..... If so, how many acres have been watered in any one season? .....

5. What crops have been raised by the water from your well, and about how many acres of each? .....

C. O. P.—10m

4/21 4/21

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

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The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Nicholas Cooper,

P. O.: Artesia,

County: Los Angeles, ; Page: 33 ; Line: 14.

State: Cal.

---

1. What is the depth of your well in feet? 180—. What is the size of the pipe in inches? 7. What was the cost of the well? about $750

2. Have you measured the water from your well? 1½ inches over top. If so, how many gallons per minute flow from it? 50 to 75 gallons. Flows more in Spring & Summer than in the Fall

3. How was this measurement made, or, in other words, how accurate do you consider it? My soil is damp. the corn grown without irrigation 1890 would be a credit to any Cowboy

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR, 4/21 4/21

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Chas. E. Birge.

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 21.

State: California.

---

1. What is the depth of your well in feet? 84. What is the size of the pipe in inches? 4. What was the cost of the well? $90—.

2. Have you measured the water from your well? . If so, how many gallons per minute flow from it? I winter it flows ¼ inch over the pipe 2 feet above the ground.

3. How was this measurement made, or, in other words, how accurate do you consider it? I summer I have to pump it.

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season? not any.

5. What crops have been raised by the water from your well, and about how many acres of each?

C. E. Birge.

C. O. P.—10m

[7-2148]
Eleventh Census
of the
United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4—1, *1891.*

4/21 4/24

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Augusta Mayo

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 88.

State: Cal.

1. What is the depth of your well in feet? about 200 ft. What is the size of the pipe in inches? 7 in. What was the cost of the well? do not know exact cost of well, as it was in place when purchased

2. Have you measured the water from your well? have not. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? It has not. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/2P
4/2P

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3/31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M Samuel Zinn

P. O.: Artesia

County: Los Angeles; Page: 33; Line: 25

State: Cal

1. What is the depth of your well in feet? 114. What is the size of the pipe in inches? 4. What was the cost of the well? 100.00

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? 34 galons and a Byer flow has Broken up out side of the Pipe

3. How was this measurement made, or, in other words, how accurate do you consider it? Bye holding a 2 galon Bucket under the Pipe and timed it Bye the watch

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season? none

5. What crops have been raised by the water from your well, and about how many acres of each? none

address Bonwalk Cal
S Zinn

C. O. P.—10m

4-18 4-18

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Joseph Adams

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 6.

State: Cal.

---

1. What is the depth of your well in feet? About 130 ft. What is the size of the pipe in inches? 6. What was the cost of the well? $130 00.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

Our land is moist and does not require irrigation only for small fruits. My well water is only used for domestic purposes.

J. L. Adams.

4-18 4-18

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., March 31, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Robert Sherer.

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 16.

State: California.

---

1. What is the depth of your well in feet? 124 ft. What is the size of the pipe in inches? 4 inch. What was the cost of the well? .....

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? The well has a set of well digging tools in it and can not be removed since it was dug some 18 years ago and it

3. How was this measurement made, or, in other words, how accurate do you consider it? does not flow more than domestic use. if it did we would not use it to irrigate with as we grow alfalfa hay and cut 8 crops in a year without irrigation. also grow corn without irrigation

4. Has any of this water been used for irrigation? ..... If so, how many acres have been watered in any one season? .....

5. What crops have been raised by the water from your well, and about how many acres of each? There is a well on an agoining farm that is 243 ft deep that flows from an 7 in. pipe 15 in and half flowed 18 in. the water is not used there but 3 to 5 miles away in a sandy district our land is a very heavy loback loam and does not require any irrigation for raising crops. surface water is 5 to 7 ft from surface.

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/18/91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4/1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M W. F. Page.

P. O.: Artesia.

County: Los Angeles; Page: 33; Line: 4.

State: Cal.

1. What is the depth of your well in feet? 170. What is the size of the pipe in inches? 7. What was the cost of the well? $240 77/50.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 10

5. What crops have been raised by the water from your well, and about how many acres of each?

Corn potatoes Straw Berrys Black Berrys Rasberrys Cabbage Tomatoes grenets Beans Know much per Acre did not keep account

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/18/1

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Moses Marleau

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 29.

State: Cal.

---

1. What is the depth of your well in feet? 140 FEET. What is the size of the pipe in inches? 7 IN. What was the cost of the well? $ 300.00.

2. Have you measured the water from your well? NO. If so, how many gallons per minute flow from it? NEVER MADE ANY CALCULATION

3. How was this measurement made, or, in other words, how accurate do you consider it?

IN MEASURING THESE WELLS WE GENERLY PLACE A BOARD EDGE WAY ON THE TOP ANDMESURE IN THIS WAY MY WELL FLOWS 4INCHES 8FT FROM THE GROUND.

4. Has any of this water been used for irrigation? NO. If so, how many acres have been watered in any one season? THE GROUND IS DAMP ENOUGH DONT NEED THE WELL ONLY FOR MY STOCK AND HOUSE PURPOSE.

5. What crops have been raised by the water from your well, and about how many acres of each?

MY FARM IS ALL IN ALFALFA

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/14/1

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3/31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr William Stahl,

P. O.: Compton.

County: Los Angeles; Page: 38; Line: 6.

State: Cal.

---

1. What is the depth of your well in feet? 270. What is the size of the pipe in inches? 7. What was the cost of the well? 600.

2. Have you measured the water from your well? . If so, how many gallons per minute flow from it? I know not how to measure it raises 4½ inches above the pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 25

5. What crops have been raised by the water from your well, and about how many acres of each?

alfala corn & orchard

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/18 4/18-

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Daniel Freeman

P. O.: Centinella.

County: Los angeles; Page: 48; Line: 1.

State: Cal.

Seven wells in group, average depth 20 feet

1. What is the depth of your well in feet? ..... What is the size of the pipe in inches? 7 inch. What was the cost of the well? .....

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? 520 Gallons.

3. How was this measurement made, or, in other words, how accurate do you consider it? Measurement was made by a Civil Engineer and is very near correct.

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? about 250 acres

5. What crops have been raised by the water from your well, and about how many acres of each? 150 acres Citrus fruits, 60 acres deciduous fruits and 40 acres of nurseries, vegetables &c.

C. O. P.—10m

over.

There were originally natural artesian springs and flow has been largely increased by sinking the wells. The water from the several wells is collected in a basin and conducted through a wooden flume to a reservoir, from which a portion is pumped to a higher reservoir to supply, under pressure, the Town of Inglewood, and the balance is taken through a 15 inch iron pipe to the orchards, about half a mile away.

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4 4 18

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Alfred D. Chapman

P. O.: Alhambra.

County: Los Angeles; Page: 20; Line: 13.

State: Cal.

---

1. What is the depth of your well in feet? 400. What is the size of the pipe in inches? 7 in. What was the cost of the well? on the side

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? The top of the well being a horizontal plane - the water rises 3/4 inches above the plane and flows over making a tumbler of water

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each? Lemons oranges Walnuts truck garden

C. O. P.—10m

for

Cost of Well

1st	50 feet	$25.00
2	50 "	50.00
3	50 "	75.00
4	50 "	100.00
5	50 "	125.00
6	50 "	150.00
7	50 "	225.00
8	50 "	250.00
		900.00
Pipe		360.00
		$1200.00

Total Cost

Depth to Surface Water 25 feet

This well is just finished and will take care of 30 acres of land. It will flow 6 feet above the surface of the soil.

A. S. Chapman

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/18

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Jan. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Alfred B. Chapman

P. O.: ~~Alhambra~~ San Gabriel

County: Los Angeles; Page: 20; Line: 12

State: Cal.

Have about ten (10) varying from 50 to 500 feet

1. What is the depth of your well in feet? ^. What is the size of the pipe in inches? 7 inches. What was the cost of the well? Said about 250 ~~$~~ for deepest

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? Some flow - 3 inches over top of pipe some only a gauze i.e. thin sheet - table to be calculated as the amount of water in inches - Ask Engineer Dept U.S.A.

3. How was this measurement made, or, in other words, how accurate do you consider it? about Nine-tenths of all my water is artesian - I collect in a large reservoir - & irrigate as needed - My figures is about

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? about 130 -

5. What crops have been raised by the water from your well, and about how many acres of each? I irrigate some of oranges & lemons - about 130 acres -

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/17/4/17

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4 — 1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Royal Barber

P. O.: Compton.

County: Los Angeles; Page: 97; Line: 19.

State: Cal.

---

1. What is the depth of your well in feet? 130. What is the size of the pipe in inches? 7. What was the cost of the well? About $150.00

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? 4

3. How was this measurement made, or, in other words, how accurate do you consider it? By watch, one minute each time, for three minutes. By quart measure

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season? Not any

5. What crops have been raised by the water from your well, and about how many acres of each? Our land does not require irrigation, no water needed to raise crops our land is moist

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/17/17

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: W. Stephen Olmsted,

P. O.: Artesia,

County: Los Angeles, ; Page: 33 ; Line: 30.

State: Cal.

---

1. What is the depth of your well in feet? 153. What is the size of the pipe in inches? 7. What was the cost of the well? $527.00.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? do not know

3. How was this measurement made, or, in other words, how accurate do you consider it? — it was what was called one & one half inch flow when first dug.

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each? The well has not been uncapped for several years, as we do not rais crops by irrigation, and only use a small portion of the water for household purposes

C. O. P.—10m

I do not consider artesian wells, of but little account for irigating farm land, or crops, as the flow is seldom sufficient to amount to any thing — save in a small way — for gardens, flowers & lawns — Cultivation for farm crops through all of this section of the country is of more importance than irigation.

Yours truly L. H. Olmsted

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/17 4/17

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C. Mar. 31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Frank B. Clark

P. O.: Centenella (Hyde Park P. O.)

County: Los Angeles; Page: 43; Line: 4

State: Cal.

2 wells 250 ft deep, 1 each — about 700 ft deep

1. What is the depth of your well in feet? ..... What is the size of the pipe in inches? 7 inches diameter. What was the cost of the well? $1500 for the three.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? One 250 ft well flows 1½ inches of water over top of pipe - about 1 foot above surface of ground - The water of this well rises some 15 feet above surface of ground.

3. How was this measurement made, or, in other words, how accurate do you consider it? Have not estimated number of gallons, as there is a difference of opinion in regard to the quantity of flow - One 250 foot well is on higher ground and does not flow at surface - The other 250 foot well flows 1½ in over top of pipe a little below surface of ground.

4. Has any of this water been used for irrigation? a little. If so, how many acres have been watered in any one season? Have simply used sufficient for a few trees in gardens.

5. What crops have been raised by the water from your well, and about how many acres of each? Do not make a practice of irrigating crops as my land does not require it - Should judge the 700 foot well will irrigate 80 acres.

Very Respectfully
Frank B. Clark

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/17 4/17

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Jas. O. Blakeley,

P. O.: Clearwater,

County: Los Angeles, ; Page: 33 ; Line: 8.

State: Cal.

1. What is the depth of your well in feet? 160. What is the size of the pipe in inches? 7. What was the cost of the well? 250 ff.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? ~~~

3. How was this measurement made, or, in other words, how accurate do you consider it? ~~~

4. Has any of this water been used for irrigation? once. If so, how many acres have been watered in any one season? 3 or 4 acres - perhaps one year.

5. What crops have been raised by the water from your well, and about how many acres of each? Corn and potatoes, by a neighbor, one season, say 2 acres of each. It is in a pasture of 90 acres and has been used chiefly to water the stock there, although it would easily [illegible] the number the pasture will support.

Very truly yours, Jas. O. Blakeley

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/17 4/17

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-22, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. D. Merrill Baldwin

P. O.: Florence.

County: Los Angeles; Page: 40; Line: 2.

State: Cal

Have 3 Artesian Depth

1. What is the depth of your well in feet? 185. What is the size of the pipe in inches? 7. What was the cost of the well? Average $215.00 Each. the Top of 7 inch Pipe

2. Have you measured the water from your well? 4 inches over If so, how many gallons per minute flow from it? Never Measured

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? Could Irrigate 50 acres from Each

5. What crops have been raised by the water from your well, and about how many acres of each? Strawberries Cabbage Alfalfa Corn & Vegetables Cannot Number of Acres of each in different Years

D Merrill Baldwin

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/16 4/17

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Andrew K. Coward,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 16.

State: Cal.

---

1. What is the depth of your well in feet? 176. What is the size of the pipe in inches? 4. What was the cost of the well? $105.00.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 15 acres

5. What crops have been raised by the water from your well, and about how many acres of each?

5 acres Alfalfa 8 acres Corn 2 acres Berries and Orchard

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/16 4/17

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Clark Nottingham,

P. O.: Artesia, Cal.

County: Los Angeles; Page: 33; Line: 24.

State: Cal.

---

1. What is the depth of your well in feet? 175 feet. What is the size of the pipe in inches? 7. What was the cost of the well? about $300.00

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? it flows one inch over the pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

My address is Norwalk instead of Artesia. I have three Artesian wells I use them for watering Stock in the pastures mostly

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/16 4/16

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. S. N. Jennings

P. O.: Clearwater.

County: Los angeles; Page: 33; Line: 8.

State: Cal.

---

1. What is the depth of your well in feet? 134. What is the size of the pipe in inches? 7. What was the cost of the well? $200 00.

2. Have you measured the water from your well? have not. If so, how many gallons per minute flow from it? Cannot answer. Flows (1½) one and one half inch over pipe would be near 16 miners inches

3. How was this measurement made, or, in other words, how accurate do you consider it? It has never been accurately measured

4. Has any of this water been used for irrigation? No Sir. If so, how many acres have been watered in any one season? The land is just being

5. What crops have been raised by the water from your well, and about how many acres of each? Improved and no water has been used

C. O. P.—10m

S. N. Jennings

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/16 4/16

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr John J. Morton

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 29.

State: Cal.

---

1. What is the depth of your well in feet? ..... What is the size of the pipe in inches? ..... What was the cost of the well? .....

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? ..... If so, how many acres have been watered in any one season? .....

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

Compton Los Angeles Co. Col. 4-8. 1891.

Hon. Robert. P. Porter. Superintendent of Census
Washington. D, C.

Dear Sir

Your (Schedule D) came to hand on the above date. As I cannot mak a list of answers appended thereto. I write this to explain (1st) my Well is a failure it was spoiled in cutting the pipe at the bottom by allowing the quick sand to flow in at the places where it was perforated and fill the pipe to a debth of about (160 ft.) which prevents the flow of water so that I have only enough for domestic use (2nd) My Well is 386 ft. deep.

3rd) Size of outside pipe 7 inches in diameter which was forced to a debth of about 300 feet when it was spoiled and another 6½ in put down inside and forced down to the debth as above 4th) cost in labor & pipe about ($ 1500.) the water stratum was at a debth of about 350 ft. thickness of stratum 25 ft. formation coarse gravel the flow of water from this stratum would have been sufficient to have Irrigated several hundred Acres of land had I secured it which I hope to do at some future time

I presume the above will not be of any use or interest to you and only write to explain

Very respectfully
J. J. Morton

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/16 4/16

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-31- , *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Geo. W. Watson,

P. O.: Clearwater,

County: Los Angeles; Page: 33; Line: 16.

State: Cal.

1. What is the depth of your well in feet? 165. What is the size of the pipe in inches? 3. What was the cost of the well? $175.

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? 2½ average

3. How was this measurement made, or, in other words, how accurate do you consider it? by so many gallons per minute

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? ⅛ of an acre

5. What crops have been raised by the water from your well, and about how many acres of each? Strawberries ⅛ of acre

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/16 4/16

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Peter Lurian

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 25

State: Cal.

---

1. What is the depth of your well in feet? 140. What is the size of the pipe in inches? 7. What was the cost of the well? $150.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? do not know But flows 3 to 4 inch above the pipe year around.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 60 to 80 acres.

5. What crops have been raised by the water from your well, and about how many acres of each? vegatebles & alfalfa mead no irrigation for it is low land.

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/16 4/16

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Nelson Ward.

P. O.: Compton.

County: Los Angeles; Page: 97; Line: 9.

State: California.

---

1. What is the depth of your well in feet? 175. What is the size of the pipe in inches? 7 in. What was the cost of the well? About $600.00

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? In Winter the flow is about four gallons per min, Summer almost ceases to flow.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/16 4/16

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Cornelius Mealey

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 28.

State: California.

---

1. What is the depth of your well in feet? One Hundred What is the size of the pipe in inches? four. What was the cost of the well? $100.00

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? about Eight or Ten

3. How was this measurement made, or, in other words, how accurate do you consider it? By timing it while filling a five gallon can but it is only approximately

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each? Used only for household purposes & Stock but can irrigate about one acre for garden Orchard &c

C. O. P.—10m

Yours &c, Cornelius Mealey

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/16 4/16

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mrs. Samuel Buckhan

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 7.

State: California.

1. What is the depth of your well in feet? 98. What is the size of the pipe in inches? 4. What was the cost of the well? $64.75.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? It only flows in winter and Spring.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season? I only use it for domestic purposes

5. What crops have been raised by the water from your well, and about how many acres of each?

4-15 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

If, after answering the questions, any other important facts should occur to you, please note them on the back of this sheet, which is to be returned in the inclosed envelope, requiring no postage.

The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr W. W. Ross,

P. O.: Clearwater,

County: Los Angeles, ; Page: 33 ; Line: 10

State: Cal,

1. What is the depth of your well in feet? 137. What is the size of the pipe in inches? 7. What was the cost of the well? 250 00.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? The well flows in the dryest weather 1½ inches over the edge of pipe and in the wettest weather 3 inches over the edges of pipe

3. How was this measurement made, or, in other words, how accurate do you consider it? The flood washed me completely out this last winter and the well is flowing now out of the channel of the old San Gabriel river.—pipe broken off at the bottom of river

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 5 acres

5. What crops have been raised by the water from your well, and about how many acres of each? 3 acres of Potatoes. 2 acres of Beats, Carrots onions and Egyptian corn

C. O. P.—10m

4 — 75 4—15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., May 31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Theo Unsendanger

P. O.: University.

County: Los Angeles; Page: 46; Line: 12.

State: Cal.

1. What is the depth of your well in feet? 345. What is the size of the pipe in inches? 7 diameter. What was the cost of the well? 1250.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? 132000 a day. in 5500 an hour

3. How was this measurement made, or, in other words, how accurate do you consider it? I measured the height of overflow over the top of the pipe.

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 100.

5. What crops have been raised by the water from your well, and about how many acres of each? Sugar beets. all of 100 acres.

C. O. P.—10m

4-15 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4/1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Edwin Collingridge

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 11.

State: Cal.

---

1. What is the depth of your well in feet? 138. What is the size of the pipe in inches? 7. What was the cost of the well? $210-.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? Sufficient for house and Stock purposes No irrigation necessary here

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

4—15—4—15—

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30- , *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: W. Simeon T. Comm,

P. O.: Artesia,

County: Los Angeles, ; Page: 33 ; Line: 6.

State: Cal.

---

1. What is the depth of your well in feet? One hundred ft. What is the size of the pipe in inches? 7 inch. What was the cost of the well? $163.15.

2. Have you measured the water from your well? 2 in flow. If so, how many gallons per minute flow from it? Between 5 and 6 Gals per minute.

3. How was this measurement made, or, in other words, how accurate do you consider it? I have a box around my well, which I measured it in, I consider this pretty accurate

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? not over five acres

5. What crops have been raised by the water from your well, and about how many acres of each? Garden vegetables and corn

(Over)

C. O. P.—10m

I found after a little experience that I didn't need so much water, I keep my well pluged and use the water only for domestic and Gardening purposes my well is an open flow,

S. T. Corum

4-15 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Adam M. Neece

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 19.

State: California.

1. What is the depth of your well in feet? 130. What is the size of the pipe in inches? four. What was the cost of the well? $122.

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? ~~10~~ 15 ~~Ten~~ fifteen

3. How was this measurement made, or, in other words, how accurate do you consider it? by holding a three gallon vessel under it three times in a minute and filling it and a little for waste say one gallon

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season? none we do not irrigate

5. What crops have been raised by the water from your well, and about how many acres of each? we raise alfalfa and cut seven to eight crops per year ten tons to the acre per year

Adam McNeece

C. O. P.—10m

4-15 — 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-31-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Abram Lawrence

P. O.: Clearwater,

County: Los Angeles, ; Page: 33 ; Line: 17 .

State: Cal.

1. What is the depth of your well in feet? ..... What is the size of the pipe in inches? ..... What was the cost of the well? .....

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it?

I am not living on a ranch any more

4. Has any of this water been used for irrigation? ..... If so, how many acres have been watered in any one season? having sold out on the

5. What crops have been raised by the water from your well, and about how many acres of each?

16th of Dec 1890. A A Lawrence

C. O. P.—10m

4 – 15 – 4 – 9

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Henry C. Carson

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 29.

State: California.

---

1. What is the depth of your well in feet? 275. What is the size of the pipe in inches? 7. What was the cost of the well? Would cost now $500

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? do not know

3. How was this measurement made, or, in other words, how accurate do you consider it? By laying a thin stick across the pipe comes 2/3 in flows very Rapid piped up 10 feet above surface I Run a little mill with the Power has 1/2 horse Power

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? can water the whole 80 acres

5. What crops have been raised by the water from your well, and about how many acres of each? Used for pasture 50 acres

Over

C. O. P.—10m

I run a hand corn Sheller. Sweep mill cutting machine for cutting Stalks & Hay Grind Stone and a small crusher, one at a time besides have plenty for Horse purpose and Irrigating my orchard

I have also one mill on another Place of 8 acres has 1½ in flow measured the same way of the other have plenty for the five acres in alfalfa

H. L. Larson

East 225. 131 feet deep 6 in pipe

4-14 : 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. David E. James

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 27.

State: Cal.

1. What is the depth of your well in feet? 160 ft. What is the size of the pipe in inches? 7 in. What was the cost of the well? About $300.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 15 or 20 acres

5. What crops have been raised by the water from your well, and about how many acres of each? Alfalfa and corn, irrigation is seldom needed in this portion of the county

C. O. P.—10m

4-15 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 9-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Levi Carse,

P. O.: Artesia,

County: Los Angeles, ; Page: 33 ; Line: 9.

State: Cal.

---

1. What is the depth of your well in feet? 225-2, What is the size of the pipe in inches? 4, What was the cost of the well? 5-18,

2. Have you measured the water from your well? no If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? Used only for domestic purpose and Stock. dampt land does not require irrigation well was bored in 1875. Labor and Material was very high.

4. Has any of this water been used for irrigation? no. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

4-15 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Henry Gamong,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 16.

State: Cal.

1. What is the depth of your well in feet? 130. What is the size of the pipe in inches? 4. What was the cost of the well? $150.00.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? I don't Know

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 45

5. What crops have been raised by the water from your well, and about how many acres of each?

Corn 35 Potatoes 5 alfalfa 5

C. O. P.—10m

artesia, L. A. Co. Cal. 4/1-91.

Mr. Robert P. Porter.
Superintendent of census.

Sir,

as the questions within, do not include all the information as regards structure of my well. I will state, that, well is open flow, not perpendicular & flowes By measurement By carpenter's square from two inches to one & one half inches, & will flow a distance of eight feet above the surface, confined within a pipe. the well is about nine years old, quality of water very healthy, soft & cool and formation at bottom very coarse gravel.

Yours Truly,
H. W. Gunning.

4-15 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 9-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Jos. E. Courtney,

P. O.: Artesia,

County: Los Angeles; Page: 93; Line: 17.

State: Cal.

---

1. What is the depth of your well in feet? 207. What is the size of the pipe in inches? 7. What was the cost of the well? 312.50

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? It flows 1½ inches over the top of the Pipe

3. How was this measurement made, or, in other words, how accurate do you consider it? I Believe it will flow 100 gallons per Minute

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 30

5. What crops have been raised by the water from your well, and about how many acres of each? 20 Acres of Corn & 10 of Alfalfa

C. O. P.—10m

4-15 4-15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: W Hammon Hubbard,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 28.

State: Cal.

---

1. What is the depth of your well in feet? 238. What is the size of the pipe in inches? 7. What was the cost of the well? about 450. dol

2. Have you measured the water from your well? when dug flowed 1 3/4 inches If so, how many gallons per minute flow from it?

one inch and three fourths the mode here is place a

3. How was this measurement made, or, in other words, how accurate do you consider it?

square on top of the pipe where it flowes over and measur the debth at center of pipe

4. Has any of this water been used for irrigation? first year If so, how many 30 acres have been watered in any one season? and since 14 or 0 years have

5. What crops have been raised by the water from your well, and about how many acres of each?

watered about 10 acers of orchard 5 to 10 acars of crops of other kind garden &c each year for 14 years

C. O. P.—10m

it is hard to explane the flow of water in galons but thare is a rule and others may send a direct answer we place a square or thin board across the top of the pipe some wells measure 3 to 5 inches mine measured 1 3/4 in flow in center of pipe, the flow of water has been a perfect success for hous use & Barn use also orchard garden &c and any well is good for orchard and garden &c get the flow now is nearly 1 inch

Yours &c

W. H. Hubbard

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4/15 4/15

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 30, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M. J. T. Smith.

P. O.: Pomona.

County: Los Angeles; Page: 26; Line: 22.

State: Cal.

---

1. What is the depth of your 2 wells in feet? 250 ft. 300 ft. What is the size of the pipe in inches? Nine inches. What was the cost of the well? $1000 1200.

2. Have you measured the water from your well? Yes. If so, how many gallons per minute flow from it? 10 gals 144 gallons ½ per minute

3. How was this measurement made, or, in other words, how accurate do you consider it?

By Civil Engineer

4. Has any of this water been used for irrigation? No. ~~If so, how many acres have been watered in any one season?~~ Conveyed in pipe line for Domestic use of houses in City of Pomona along with water from other wells.

~~5. What crops have been raised by the water from your well, and about how many acres of each?~~

1st well was at one time as good as 2nd well, but was practically ruined by well borers before completed

C. O. P.—10m

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

4/15 4/15

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C. Mar. 31, 1891.

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Edw. McDonald

P. O.: Clearwater.

County: Los Angeles; Page: 33; Line: 9.

State: Cal.

---

1. What is the depth of your well in feet? 266. What is the size of the pipe in inches? 7. What was the cost of the well? $700.00.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? over two one inch

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? about 40 acres

5. What crops have been raised by the water from your well, and about how many acres of each?

alfalfa 2 acres 20 acres corn balance in potatoes & grapes

C. O. P.—10m

4/15 4/15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm John Reid.

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 14

State: Cal

1. What is the depth of your well in feet? 228. What is the size of the pipe in inches? 7. What was the cost of the well? about $1400, 13/4 inches in centre of Pipe

2. Have you measured the water from your well? If so, how many gallons per minute flow from it? I have no idea how many gallons having made no test

3. How was this measurement made, or, in other words, how accurate do you consider it? By wetting a common hand saw and dusting + with dry sand on lazing it across pipe it washed + of the sand 13/4 inches in centre of Pipe

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? It is capable of watering thoroughly about 1/2 acre per days of 24 hours

5. What crops have been raised by the water from your well, and about how many acres of each? I have used it mostly on Alfalfa with good results especially of drowning out Gophers

C. O. P.—10m

We could have it Piped in to our house or for stock purposes any where we want to take it to We have no fears of a dry season when we have such a well but we do as little summer Irrigation as possible as it is generall thought that it raises the Alkali we have also used it some for raising fish, the Water is good we would not like to live where we could not have it now

If you wish to use my name you can do so

Very Resp'y John Keir

4/15 4/15

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm Jas. Pease.

P. O.: Artesia.

County: Los Angeles; Page: 33; Line: 10.

State: Cal.

1. What is the depth of your well in feet? 240 ft. What is the size of the pipe in inches? 7. What was the cost of the well? $225.00.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

I will Say in This Locality
Very Little iff Eny Irrigation Is
Deem Wel have What is Kin- ds
The Dimp Soill and all Crops
and Fruit of all Kind Deemed

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5/5/8/9

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: W. Geo. Sewers.

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 12

State: Cal.

---

1. What is the depth of your well in feet? 189 ft. What is the size of the pipe in inches? 6 Diameter. What was the cost of the well? 250 Dollars.

2. Have you measured the water from your well? No in. If so, how many gallons per minute flow from it? the water flows 1½ inches over the well the water has never been measured

3. How was this measurement made, or, in other words, how accurate do you consider it? I think. 10 inches Miners measure

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 5 Acres

5. What crops have been raised by the water from your well, and about how many acres of each? Alfalfa and Late Potatos is all the irrigation that done here. Late potatos planted in August

C. O. P.—10m

The average cost of the wells in Artesia district 300 ft the prices for baring is

50 Cts Ft. 100
75 Cts Next 50
1.00 Next 50
and raise 25 Cts

Per foot at the end of every 50 ft the Tubing cost 60 Cts Per foot

Yours Respectfully
John Severs

[7-2148]

Eleventh Census of the United States.

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

5/8/91

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Henry M. Hatch,

P. O.: Artesia, is Norwalk

County: Los Angeles; Page: 33; Line: 4.

State: Cal.

1. What is the depth of your well in feet? 137 feet. What is the size of the pipe in inches? 4. What was the cost of the well? 140 dollars

2. Have you measured the water from your well? not in gallons, If so, how many gallons per minute flow from it? only measure by the depth of watter across the top of pipe it use to flow bout 2 inches but only one inch now

3. How was this measurement made, or, in other words, how accurate do you consider it? it runs bout 4 miners inches giving one inch head

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? I have used it on only 6 acres but could do more

5. What crops have been raised by the water from your well, and about how many acres of each? I used it for corn & potatoes. I have a large reservoy and can flood an acre in one hower I can flood the 6 acres in 36 howers and can keep doing so every 36 to 40 howers

Yours &c H. M. Hatch watter is soft puer watter

-91

4/23 4/24

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. John Howard

P. O.: Compton.

County: Los Angeles; Page: 38; Line: 18.

State: Cal.

---

1. What is the depth of your well in feet? 204. What is the size of the pipe in inches? 7. What was the cost of the well? $300.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 25.

5. What crops have been raised by the water from your well, and about how many acres of each?

5 acres orchard – 1 acre grapes – 19 acres alfalfa.

C. O. P.—10m

4-30-91
5-1-91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Apr. 3, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Samuel Merrill

P. O.: Florence.

County: Los Angeles; Page: 849; Line: 27.

State: Cal.

1. What is the depth of your well in feet? 80. What is the size of the pipe in inches? 7. What was the cost of the well? 90 cts pr foot for the first one hundred feet and then 1.25 pr foot extra

2. Have you measured the water from your well? Occasionally. If so, how many gallons per minute flow from it? Some more & some less according to the size of the pipe and strength of flow

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? It has. If so, how many acres have been watered in any one season? Last year I watered about 45 acres

5. What crops have been raised by the water from your well, and about how many acres of each? Last year I had some 20 acres corn 100 or more acres of barley & strawberries pumpkins and other vegetables, in all to the amount of 45 acres and could have wet more if I had wanted to.

C. O. P.—10m

Florence Apr 23. 1894.

Speaking of these artesian wells we dont know exyactly what they will do as some are larges than others and some are so a strongs flow but from one well last year I flooded some twenty acres in one week and did not more than half tend it as I was plowing and would go & look of it twice or three times a day.

But to say the least they are a great thing to have on a place as when you want water all you have to do is to open the case and let the water out and then when done close the cap down and stop them up

Yours Respectfully

S W Merrill

Florence

Los Angeles Co

Cal.

4-30-91
5-1-91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. John F. Norton

P. O.: Compton.

County: Los Angeles; Page: 37; Line: 28.

State: California.

---

1. What is the depth of your well in feet? 157. What is the size of the pipe in inches? 7. What was the cost of the well? $200,00/00 two hundred.

2. Have you measured the water from your well? ..... If so, how many gallons per minute flow from it? Have not measured it but probably varying from one to two miners inches if alowed to flow

3. How was this measurement made, or, in other words, how accurate do you consider it? Not verry accurate. In a verry dry time it would not flow over the surface. but ample supply if raised artificially by horse power or engine

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? Only from one to three acres

5. What crops have been raised by the water from your well, and about how many acres of each? Principly Alfalfa Our land in this vicinity requires in genral but little irrigation

C. O. P.—10m

More than what nature supplyes
in the form of raine and the under ground
seepage from the rivers. Our lands in my
locality are greatly in need of improvement
by way of providing sufficient chanels in order
to better controlling the waters of the Los
Angeles and San Gabriel rivers. Very Respectfully
P. H. Norton

P S Any information that I am able to give
will be given cheerfully and with pleasure
Norton

4-30-91
5-1-91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Lucius A. Leavitt

P. O.: Compton.

County: Los Angeles; Page: 28; Line: 21—.

State: Cal.

---

1. What is the depth of your well in feet? 250. What is the size of the pipe in inches? 7 in. diam. What was the cost of the well? about $350.

2. Have you measured the water from your well? —. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? The water boils up 2½ inches higher than the pipe, I dont know how many gallons

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? Thirty five.

5. What crops have been raised by the water from your well, and about how many acres of each? Alfalfa 25 acres, Corn 10 acres

C. O. P.—10m

The farm I live on is two miles east of Compton on what is called the mesa land. It raises fine crops of barley without irrigation, but gets extremely dry and hard in the summer. We can raise fine alfalfa by irrigating after each crop has been cut and hauled. Six crops may be raised each season. One irrigation does for each crop of alfalfa, which should be cut every five weeks. My well irrigates 1½ acres a day. By irrigation this land produces all crops ordinarily raised by farmers, and produces fine fruit.

Yours etc, L. A. Leavitt.

4-30-91
5-1-91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Amos Jenkins

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 80.

State: California.

---

1. What is the depth of your well in feet? 114. What is the size of the pipe in inches? 4. What was the cost of the well? Cost of material about $75,00

2. Have you measured the water from your well? Have not. If so, how many gallons per minute flow from it? Quantity unmeasured & unknown.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? No. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4-30/30 91.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Wm. Geo. Watson,

P. O.: Clearwater,

County: Los Angeles, ; Page: 33 ; Line: 11.

State: Cal.

1. What is the depth of your well in feet? 94. What is the size of the pipe in inches? 3. What was the cost of the well? $100.00.

2. Have you measured the water from your well? . If so, how many gallons per minute flow from it? About 45 gal.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? . If so, how many acres have been watered in any one season? One acre.

5. What crops have been raised by the water from your well, and about how many acres of each? Strawberries and garden truck.

C. O. P.—10m

4-30 5-1

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-3 *, 1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

The inquiry relates mainly to the flow of water and the success which has attended its utilization for the purpose of irrigation, and you will confer a favor upon this office by answering the subjoined questions as fully and accurately as you can.

From many portions of the west urgent requests have been received for information as to the average cost and general utility of artesian wells, and the results of your experience may thus become of public service. If your well has not been successful in reaching good water or obtaining it in paying quantities, please mention these facts, as they may be of equal and even greater importance than the successes of others.

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The information you may furnish will not be used in connection with your name, or in any way that would be detrimental to you.

Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: M. Everett Thayer

P. O.: Florence.

County: Los Angeles; Page: 849; Line: 29.

State: Cal

---

1. What is the depth of your well in feet? 152. What is the size of the pipe in inches? 7. What was the cost of the well? $240.00.

2. Have you measured the water from your well? yes. If so, ~~how many gallons per minute flow from it?~~ 4 feet of head made 4½ inches flow Today I have 7 feet of head

3. How was this measurement made, or, in other words, how accurate do you consider it? Cut off or unjoint the pipe, place a flat piece of tin or sheet iron across the well perpendicular, note the highest point above the edge of pipe while flowing

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 25 or 30 I could irrigate 50 or 60

5. What crops have been raised by the water from your well, and about how many acres of each? Cabbage 12, Corn 10, Potatoes, Alfalfa, &c, but not all in one year

C. O. P.—10m

Mr A. E. Putney, Florence, L. A. Co. California.
Mr Putney has sunk more artesian wells in L. A. Co
than any 2 well borers

I struck artesian water at a debth of 80 feet
I have 72 feet water strata

Wells containing 4. 6, 10, or 12 feet water strata would be
a failure for irrigation no matter how high the water
would raise in the pipe

a successful well ought to have at least 2 inches flow
With a well having less than 2 inches flow you could irrigate
some land by seepage

Respectfully

Everett W. Thayer

Florence
Los angeles Co
California

4-30 5-1

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Robb Kursey.

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 24.

State: California.

---

1. What is the depth of your well in feet? 230. 220. 72.72 What is the size of the pipe in inches? 7. What was the cost of the well? .....

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it? .....

3. How was this measurement made, or, in other words, how accurate do you consider it? One is said to have a ten inch flow. and the other three about 2 inches each

4. Has any of this water been used for irrigation? Not now If so, how many acres have been watered in any one season? .....

5. What crops have been raised by the water from your well, and about how many acres of each?

.....

.....

C. O. P.—10m

We do not use the water to irrigate with as the land here dont need it.

Mrs. L. Moore from whom we bought the place had the wells dug and used the water to irrigate with. But we think hurt the land more than he gained I have not opened the wells. One is said to flow about ten inches above the pipe and the other three only 2 inches. each I have been here three years.

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5-1/191

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 2/1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Jacob P. Thompson

P. O.: ~~Artesia~~ Norwalk

County: Los Angeles; Page: 33; Line: 24.

State: Cal.

---

1. What is the depth of your well in feet? 130. What is the size of the pipe in inches? 7. What was the cost of the well? $ 2040.00.

2. Have you measured the water from your well? No. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? About 5

5. What crops have been raised by the water from your well, and about how many acres of each?
Corn, Alfalfa and garden vegetables

C. O. P.—10m

over.

I have a 4 in well Also
127 feet deep. Cost $108.00
I irrigate orchard & garden
from it- about one acre

People generally have had good
success in obtaining Artesian
water in this vicinity

Nearly every land owner
has one or more Artesian
wells.

Yours Respectfully

Jacob P. Thompson

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5-1/191

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. Wm. F. Ruff.

P. O.: Florence.

County: Los Angeles; Page: 48; Line: 9.

State: Cal.

---

1. What is the depth of your well in feet? 72 feet. What is the size of the pipe in inches? 7 inches What was the cost of the well? $110.

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it? the water flowes 1/4 inch over the 7 inch pipe like this

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? 12 Acres

5. What crops have been raised by the water from your well, and about how many acres of each? I have November 1890 planted in Cabbage, at the present time I am planting the same Land in to Potatoes (do not irrigate) after Potatoes are off I will

plant the some Land in to Corn or
Beans but I will have to irrigate the some
Land, my Alfalfa I do not irrigate -
I have also 1600 Fruit trees on the some
12 Acres

W Ruoff
Florence
Los Angeles Co
California

4 30/30 91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. F. F. Culver.

P. O.: Compton.

County: Los Angeles; Page: 87; Line: 2.

State: California.

---

1. What is the depth of your well in feet? 236. What is the size of the pipe in inches? 6. What was the cost of the well? between four & five hundred Dollars

2. Have you measured the water from your well? have not. If so, how many gallons per minute flow from it? I am unable to say not knowing the Velocity. It flows a debth of 2½ in over the top of the Pipe 3 ft above the surface

3. How was this measurement made, or, in other words, how accurate do you consider it? By removing the top joints of pipe to the surface fully Fifty Gals per minute flows from my Well

4. Has any of this water been used for irrigation? has not If so, how many acres have been watered in any one season? it would probably Irigate 20 acres

5. What crops have been raised by the water from your well, and about how many acres of each? It is used only for domestic purposes for the Citizens of Compton from which I receive a small compensation of Six dolls per annum from each Family

Yours Truly (F. F. Culver

C. O. P.—10m

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

4 30/30 91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., April 1, 1891.

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mrs Henry Catey.

P. O.: Compton.

County: Los Angeles; Page: 97; Line: 22.

State: California.

---

1. What is the depth of your well in feet? 145 ft. What is the size of the pipe in inches? 7 in. What was the cost of the well? $150.

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? do not know
The water flows 2 inch above the pipe

3. How was this measurement made, or, in other words, how accurate do you consider it?
the pipe is seven inches in diameter
We measured the distance it flowed
above the pipe all around the edge

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season?

5. What crops have been raised by the water from your well, and about how many acres of each?
potatoes, sweet potatoes, beets,
cabbage and other vegetables. 2 acres

C. O. P.—10m

This irrigation was done in the dry years. It is unnecessary to irrigate in this locality except in dry years.

4 30/30 91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 4-1, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Wm. Field.

P. O.: Florence.

County: Los angeles; Page: 48; Line: 8.

State: Cal

---

1. What is the depth of your well in feet? 198. What is the size of the pipe in inches? 6 inch. What was the cost of the well? about $175.—

2. Have you measured the water from your well? No—. If so, how many gallons per minute flow from it? Pipe is 6 inches in diameter, out of level with the ground. Force of expulsion is sufficient to throw the water constantly 8 inches above the surface. What is the quantity of water ejected per minute? I should guess about 100 gal. from practical calculation.

3. How was this measurement made, or, in other words, how accurate do you consider it?

4. Has any of this water been used for irrigation? Yes. If so, how many acres have been watered in any one season? As per Question 5.—

5. What crops have been raised by the water from your well, and about how many acres of each? 20 acres of alfalfa — Seven cuttings per year at average of 1 Ton ½ acre ½ crop. — Five of these crops I irrigate; irrigating from 3 days to 6 days to flood according to season of year.

C. O. P.—10m

4 80
38 91

[7-2148]

Eleventh Census of the United States

AGRICULTURE.

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., 3-30-, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr Jas F. Chapkell,

P. O.: Artesia,

County: Los Angeles; Page: 33; Line: 13.

State: Cal.

---

1. What is the depth of your well in feet? 180 feet. What is the size of the pipe in inches? 7. What was the cost of the well? 400 dollars

2. Have you measured the water from your well? yes. If so, how many gallons per minute flow from it? it has a inch and a half flow I never measured it to Dechan menny gallons it would flow per minute

3. How was this measurement made, or, in other words, how accurate do you consider it? it was measured through a little Sugare Sqwar box

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? 8 acres I know of

5. What crops have been raised by the water from your well, and about how many acres of each? 1 acre of potatares 2 acres fruit and berries 5 acres of Corn

I could irrigate 20 acres of land
if it was used wisely I think it is
a grate succes: I couldent get along
with out my well yours Truly

J. F. Chappell

[7-2148]
Eleventh Census of the United States
AGRICULTURE.

5/1/91

DEPARTMENT OF THE INTERIOR,

CENSUS OFFICE,

Washington, D. C., Mar. 31, *1891.*

IRRIGATION.—(Schedule D.)

SIR:

The census enumerator of the district in which you resided in June last reported you as having an artesian well on your farm. The instructions given to the enumerator did not make it his duty to make further inquiries concerning this important subject, it being considered that that could be done more satisfactorily by direct correspondence from this office.

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Very respectfully,

ROBERT P. PORTER,
Superintendent of Census.

Name: Mr. W^m Behm.

P. O.: University.

County: Los Angeles; Page: 45; Line: 11.

State: Cal.

1. What is the depth of your well in feet? 85'. What is the size of the pipe in inches? 8 inches. What was the cost of the well? $1.50 per foot. One Dollar. fifty Cents

2. Have you measured the water from your well? no. If so, how many gallons per minute flow from it?

3. How was this measurement made, or, in other words, how accurate do you consider it? about two inches flow.

4. Has any of this water been used for irrigation? yes. If so, how many acres have been watered in any one season? I could not say exactly. but 20 Acres could be irrigated with it.

5. What crops have been raised by the water from your well, and about how many acres of each? alkalfa, barley, Strawberry and Garden truck.

C. O. P.—10m

the Land is used for a Dairy at present..